

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



MONTHLY MAGAZINE.

NOVEMBER, 1879.

THERE has always been considerable confusion about the Lilies of California, and sometimes it has been thought that this confusion was intentionally increased by interested parties, in order to put as many species and varieties into the market as possible; but without being uncharitable, there is no doubt much occasion for misunderstanding by the variableness of the species from the incidents of locality, climate, and soil where the native bulbs are found. We had supposed, as was also the opinion of some of the best botanists of California, that the species, *Washingtonianum*, *parvum*, *Humboldtii* and *pardalinum* would be found to comprise the whole of the western Lilies. A recent revision of the order Liliaceæ by the able curator of the Harvard Herbarium, Mr. SERENO WATSON, discovers eight distinct species. Without entering into minute specific descriptions, we can make the general subject clear to our readers by saying that, of the four species above named, *Washingtonianum* is distinct from the other three by its color, it being white and changing to a purplish tint as the flower becomes old, while each of the others is of some shade of reddish-orange, closely resembling the color of *L. Canadense*. It has long been known that some plants of *Washingtonianum* produce flowers which, when they first open, although nearly white, still have a slight tinge of lilac, and as they become old change to a rosy-purple, and in this stage are quite distinct

from the more numerous ones that are merely purplish. It was supposed that this highly-colored kind was only a variety of *Washingtonianum*, but it appears to have other important distinctions enough to entitle it to be ranked as a distinct species, and, as such, is called *Lilium rubescens*. Another species, but which it has never been our good fortune to see, is *L. Parryi*, described as having its flowers of a clear, pale-yellow color. Thus, here are three species where before we only recognized one.

Coming now to those that have a reddish orange color, we find a new species, called *maritimum*, which has been separated from *L. parvum*. Another species is *L. Columbianum*, which had previously been thought to be a variety of *Humboldtii*. There are then five species with the reddish orange-colored flowers, all varying more or less in many particulars.

These *Canadense*-like Lilies have strong points of resemblance, and on our eastern side is found one species, called *superbum*, that is quite difficult to distinguish from *Canadense*. *Superbum* has also a variety, at least so considered by Mr. WATSON in his revision, but which is alluded to in the following note from him, and which will in future probably be considered a species. The note was in response to an inquiry as to the specific character of *L. Columbianum*:

"I send you my late revision of the North American Liliaceæ, which will show you my con-

clusions as to the Lilies of the Pacific coast, and the nomenclature which will be followed in the second volume of the *Botany of California*, shortly to be issued.

"Most of the species are pretty clearly distinguished by their bulbs, but the differences are not easy to define clearly in few words. The bulb of *L. Humboldtii* should have been described as not only larger than that of *L. Columbianum*, but longer and somewhat rhizomatous—still, nothing like that of *L. pardalinum*.

"I have just received notes upon *L. Carolinianum*, and fruiting specimens, which lead me to believe that it should be kept distinct from *L. superbum*. The flowers are very fragrant, and the capsules are pretty strongly 6-winged, which is never the case in *L. superbum*."

The hope that we held a few years since of the value of Californian Lilies for cultivation in this part of the country, after repeated and expensive trials, is now relinquished, and, although any of them by the proper care and in suitable conditions may be reared, yet, for general cultivation we can recommend only *L. pardalinum*. This appears to be hardy and thrifty almost everywhere, and the other species almost invariably fail.

MUSHROOMS.

Every autumn we receive many letters asking us to describe the true Mushroom, or such as may be eaten with safety. Accompanying these often are specimens of fungi, ranging from the common puff-ball or toad-stool to the true meadow Mushroom. Our friends find them in the meadows, by the roadside, or on the lawn, often in abundance, and yet are afraid to use them, from having read of sad cases of poisoning by fungi supposed to be Mushrooms. When a mistake is attended with such consequences, caution is certainly commendable, and the necessity for caution will make people suspicious, and prevent many from eating a fungus of any species. A gentleman remarked before an association of naturalists, who were feasting on Mushrooms they had gathered, that "if I was introduced to a person and told I must conduct myself towards him with great caution, or he would do me deadly harm, I think I would let him alone; and so I feel toward the fungus family, which has some members so villainously disposed that possibly I may pay for my acquaintance with my life. A prudent young lady of my acquaintance says she never partakes of these dainties till she has seen the effect they produce upon some one else."

It was the London *Punch*, we believe, that said there was only one way of testing Mush-

rooms to ascertain whether they were eatable or not, that was, to eat them, and if you lived they were fit for food, and if you died they were not. While we would caution against rash experiments, there are certainly a few well-known species that can be eaten with perfect safety, and are considered great luxuries by those who are so fortunate as to obtain them.

Our meadow Mushroom, *Agaricus campestris*, with its pink gills, turning black by age, is well

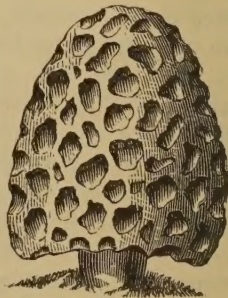


TRUE MEADOW MUSHROOM.

known, and regarding this there need be no mistake. Every one at all acquainted with this Mushroom will recognize it as readily as he would his brother, yet it is difficult to tell just why, except from general appearance. This Mushroom grows most abundantly in pastures, in the autumn, and, to our taste, is the best of the whole family. We have eaten it as long as we can remember, and shall continue as long as we can obtain it, either in the field or by culture.

A very excellent Mushroom, that appears in the spring in orchards and thin woods, is the Mosel, which we received during the spring from several places in the Western States, and from Central New York. We find it in the neighborhood of Rochester, but not very abundantly. It may be known by its honeycombed appearance. It is an excellent variety, and may be dried and kept for any length of time without the least injury to its flavor.

A species never before abundant in this section, to our knowledge, but now growing in immense quantities, even on some lawns, is the Maned Mushroom. It is egg-shaped, clear white, with a rough skin which readily peels



MORSHELLA ESCULENTA.

off. They grow in clusters, and specimens often reach more than five inches in height. They are safe to eat, and very good when young, but soon become useless, and, in fact, decay very rapidly. A lady writes of this species:

"The Maned Mushrooms grow in dense clusters, each young plant like an attenuated egg, white and smooth. Presently some exceed the others in rapidity of growth, and their heads



MANED MUSHROOM—1. STEM; 2. PILEUS.

get above the ground, the stem elongates rapidly, the ring falls loosely round the stem, the margin of the pileus enlarges, and the oval head assumes a bell-shape; then a faint tint of brown spreads universally or in blotches over the upper part of the pileus, and the whiteness of its gills changes to dull pink. A few more hours and the even head of the pileus has split in a dozen places, the sections curl back, melt out of all form into an inky fluid, and on the morrow's dawn a black stain on the ground will be all that remains. And so on with the others in succession."

These are the only varieties received this season that are edible.

Mushrooms can be grown artificially if the proper moisture and temperature is furnished, but in these points the fungus is very exacting. Some seasons our meadows abound with Mushrooms, while during others scarcely a specimen can be found. This season, in consequence of the dry weather, we have scarcely seen a dozen specimens of our common meadow Mushroom where last year they were quite abundant. Many undertake Mushroom culture and fail, while some succeed. In Paris Mushrooms are grown so extensively as to not only supply that city, but most of the wealthy cities of Europe, and many are canned for the American market.

FUCHSIAS.

We take great pleasure in presenting our readers, this month, with a group of Fuchsias, painted from specimens gathered from our grounds, and we think our artist has performed the work of transferring them to paper with marked success. The Fuchsias, on account of their graceful habit and varied, yet delicate, coloring, have become deservedly popular. When added to this we consider the fact that it is one of the best plants we possess for pots or boxes, either for winter-flowering in the house, or for shady verandas, or beds in partially-shaded places in the garden, we see no reason why this popularity should not continue and increase.

In our colored plate *fig. 1* represents Pearl of England, one of the best winter-bloomers we have; *fig. 2* shows the double purple, the type of which we find in the Elm City, Gem, Avalanche, &c., each varying somewhat from the others; *fig. 3* is Arabella, a large single flower and an early bloomer; *fig. 4*, Deutscher Kaiser, a very large flower with maroon-tinted petals; *fig. 5*, the double white class, which includes Smith's Avalanche, Montrose, Princess of Wales, and some others; *fig. 6*, a miniature variety, called Microphylla, the whole plant, flowers and leaves, a perfect Lilliputian among the Fuchsias.

The Fuchsia, it is reported, was first introduced to Europe from South America, by a sailor, who had little knowledge of botany or plants, but who certainly possessed some taste. The florists were not long in finding it, and by rapid propagation soon supplied plants to lovers. The Fuchsia will endure a good deal of cold, unless it has been made tender by forcing, and we have them in our garden in bloom when many other plants are destroyed by frost. This is partly, however, owing to the fact that they usually occupy some sheltered position, to which they have been assigned for the benefit of the shade which is necessary to their perfection in the open ground during the summer.

Once, when in Europe, we saw, at Ventnor, in the Isle of Wight, a Fuchsia tree, perhaps twenty feet or more in height, with a trunk full fifteen inches in diameter. The editor of the *Flore des Serres*, of Belgium, in writing of this tree, says it is doubtless the largest specimen in Europe, but is only a baby compared with specimens the editor had seen in South America. Seeing our notice of this tree, Mr. NICHOLLS, of Sharon Springs, N. Y., wrote us that he had "seen Fuchsias in the Isle of Jersey, in the English Channel, thirty feet in height, and there are hundreds there from twenty to twenty-five feet."

CHINESE AND JAPAN PINKS.

It is now almost the middle of October, a few light frosts have robbed some of our garden flowers of their brightness, but a few are growing with more than their usual vigor, and showing to our admiring gaze more than ordinary brightness, seeming to like the cool, dewy nights of autumn. Among these we notice especially the Chinese and Japan Pinks, that have flowered freely ever since June, and are now more beautiful than ever. The only fear we have is that such abundance of bloom will so weaken the plants that they will suffer during the winter, although now seeming so vigorous. To prevent this we shall remove some of the flowers—certainly one-half, except where the plants are remarkably strong.

It requires some courage to cut away the flowers and mar the beauty of the plants, but future good in many cases requires the sacrifice, especially with free-flowering plants that are expected to survive the winter. It is surprising how long many biennial plants can be made to live and flourish, if their strength is only husbanded in this way. It is an old saying that no one should thin the fruit on his own trees, because he would never take off enough, but should entrust it to some disinterested person. Perhaps this would be the better way with our flowers.

The old Chinese Pink, *Dianthus Chinensis*, we think, must be familiar to all our readers, for we have cultivated it, and it has been common in gardens as long as we can remember; but the old flower was small. New and superb varieties have been introduced of late years, mostly from Japan, and now *Dianthus laciniatus* and *D. Hedderwigii*, both double and single, are among the most brilliant and useful of our garden flowers. Indeed, as the result of hybridization, they have run into many varieties, some with flowers of great size, while others are remarkable for their rich coloring. Plants of the tall sorts are from twelve to fifteen inches in height, while the smaller kinds make handsome, low, compact plants.

The *Dianthus* flowers during the whole summer, and, as before observed, is uninjured by light frosts, and even seem to grow the better for weather that proves disastrous to some of their neighbors. If small and healthy plants are taken up and potted with care, they will make very good plants for the house, if not subjected to too much warmth and a dry atmosphere. A little frost will not injure them.

Seed should be sown as early as possible in the spring to secure early flowering, but seed

sown in a shady place in June will make good plants for late summer flowering, and these younger plants will usually endure the severest winters without injury. The *Dianthus* transplants, even when large, without material injury, and with the slightest possible check to its growth.

Every season brings to the amateur gardener its work and its pleasures. In the spring how earnestly we sow and plant in anticipation of a pleasant future. In the gay summer we train and prune, and enjoy a feast of beauty. In the sober autumn, how richer far than anything summer can boast seem the Dahlias, and Stocks, and Pinks, and many other gorgeous flowers that seem to defy Winter, and laugh with thoughtless gaiety at the old fellow as he steadily, yet surely, marches on to final conquest. Autumn, too, has its duties; the walks must be kept clean, for nothing looks worse than grassy walks late in the season, while all weeds from the beds should be gathered up and placed upon the manure pile to rot. In this way hosts of seeds will be destroyed. Autumn is the proper time to divide all hardy herbaceous plants, Lilies, and other things. In the autumn alone can beds of Hyacinths, Tulips, and other hardy bulbs be made. In dry soil and moderate climate it is well to plant all hardy trees and shrubs in the fall, because in the spring there is so much to be done that some things are likely to be forgotten; the weather, too, is usually unpleasant and the soil wet and unfit to work a large portion of the early spring. In the autumn preparation must be made for flowers in the house, and, with a little attention, a good many things can be gathered from the garden. Young plants of Mignonette and Sweet Alyssum can be taken up and potted. Madeira Vines can be cut back and placed in pots for winter use. Any Tuberose that have shown a flower stem without flowering may be removed with a little care. A look about the garden before severe frost will usually show a great many plants that for some reason failed to bloom in the grounds, that can be transferred to the house. After potting, give a good supply of water, and keep in a cool, shady place for several days. All plants from the open ground, and designed for house-culture, should be taken up before the weather is very cold, and so early that fire is not needed in the room where they are to be placed. If the plants become acclimated to cold weather and are removed to a warm room the change is so great and sudden that they become injured,



DIANTHUS DIADAMATUS.



DIANTHUS HEDDEWIGII.



DIANTHUS LACINIATUS, DOUBLE.



DIANTHUS LACINIATUS, SINGLE.

and the leaves are apt to fall, so that half the winter is gone before they fully recover. This is the proper course with all plants for the house. Give them plenty of time to become inured to the hardships which they will have to endure in our warm, dry, dusty rooms. Plants

that die down to the ground every autumn, the roots only remaining alive, like the Pæony, may be protected from severe cold by a little coarse manure. Plants that retain their foliage all the winter are best protected by a few evergreen branches or straw, something that will admit air.

COLOR IN FLOWERS.

We have received several inquiries, from time to time, from our correspondents, in regard to the colors of flowers, and it has been suggested that a colored plate, or chart, be given in the MAGAZINE, as a guide in the selection of color when purchasing seeds or plants, and also as a means of instruction and for reference in deciding the color of any flower. Such a chart we have thought would be quite valuable, particularly in taking us through the labyrinth of reds, roses, pinks, crimsons and magentas, and we have had serious thoughts of making just such a chart, that should be a standard, for our own friends at least; but so vast is the world of flowers before us, and so many good things abound in the way of beautiful flowers, that we have waited in vain for an opportunity. A correspondent, and an artist, it seems, has become impatient of the delay, and furnishes us the following notes of flowers that represent the standard colors of the artist and color manufacturer, and which, he thinks, will in some manner answer the purpose, and give a new interest to the culture and study of flowers:

White, the emblem of purity, may be fitly represented by the Candidum Lily, as it adds both stateliness and grace. The nearest approach to Black is to be found in the Coleus called Hero, a very fine ornamental plant; some Dahlias, also, are noted for their intense depth of color, and the Pansy, King of Blacks, is almost entirely black. Mauve, a subdued bluish tint, is seen in *Ageratum Mexicanum*. The Sky Blue is well represented by *Delphinium celestinum* and *Nigella damascena*. The brilliant French blue, Ultramarine, by the *Salvia Patens*. Lilac is shown in the flower of the common shub of that name, or equally well in the Wistaria flower. Lavender is shown in the flower of *Linum perenne*. Buff, or Chamois color, is finely displayed in the *Thunbergia alata*. Pure Yellow in the *Eschscholtzia Californica*, Cassia, and some of the Marigolds. Orange, deep and rich, is seen in the flower-spikes of *Erysimum Perowskianum*. Light Scarlet; the best example of this color is to be found in the new striped Geranium called New Life, the color of which is particularly pure, while of Deep Scarlet, *Lychnis Chalcedonica* is the best representation. Orange Scarlet, the well-known Tiger Lily. For Blood Red, choose *Adonis autumnalis*, and for Chocolate, or Maroon, the flowers of the new climber, *Akebia quinata*, will do splendidly. Pink, pure and sweet, is to be found in the flowers of *Oxalis rosea*. Blush is simply white, faintly tinged or

suffused with pinkish tint; frequently seen in white Roses or light Gladiolus. Light Rose is well shown in the Dicentra, or Bleeding Heart. Deep Rose is always present and true in that splendid Japan Lily, *Lancifolium roseum*; this is also the typical color of the Rose family, from which all other colors in that class diverge, so to speak. Magenta is finely represented in the Digitalis, and Purple in the flower of the Malope.

The compound colors are the result of mixing two or three of the standard colors, and are largely represented in the different varieties of Asters, Pansies, Petunias, Phlox, Portulaca, Dahlias, and Gladiolus. Abronia, for instance, is called rosy-lilac, because it is a compromise between light rose and pure lilac, or a mixture of the two; Callirhoe, purplish crimson, because not enough rose color is in it to be clear crimson, and not enough blue to make it a decided purple, and so with many other descriptions of the color of flowers.

There is a practice among florists, however, of describing new flowers as having certain colors, which is apt to mislead; as, for instance, we sometimes see advertised a red Pansy, but there is no such flower of that color, and it is very doubtful if there ever will be—it is simply a foxy, coppery-colored flower, and often not very bright or clear at that; and the only reason for calling such a flower red, is because it is the nearest approach to that color among the Pansies. The same thing obtains when we speak of a Yellow Phlox; the best thing that florists have been able to do for us is to produce a dirty-looking yellowish, buff-colored flower, and yet, because it has a tinge of yellow in it, the original grower has put it into the market under that name, and florists are obliged to sell such because people ask for them. Such flowers certainly show what patient labor and skill may do in an almost impossible field, but the practice of naming flowers, as we have already intimated, is likely to mislead the novice in floriculture. Those who have had some experience in this delightful pastime know that certain families of flowers never produce yellow blooms. The Asters, for instance, are not likely to run that way, and while Pansies give us very fine grades of yellow, there is no such thing as getting a beautiful rose-color among them. Then again, while we have choice varieties of reds and yellows in the Portulaca, who ever heard of a blue one? and when we do hear of such, we shall be very slow to believe.



FERNS.

MR. VICK :—Would it be asking too much of you to tell the readers of your valuable MAGAZINE (I think it the best floral paper I have ever met with, and I have taken several) how easy it is to grow the wild Ferns. I think no plant is easier grown, and yet several of my floral correspondents write me for particulars, and others will say, "Don't send me any more Ferns, for I cannot get them to grow." I have a bed along the north side of our house, about sixty feet long and two feet wide, filled with dirt from the wood-pile, and some from the woods; although I have other beds of Ferns that do equally as well, that have only wood-pile dirt. The long bed is filled with Ferns and a border of Pansies, and every one who sees it admires it, and well they may, for it has such a cool, refreshing look. I try to encourage everybody to grow Ferns, for I love them so dearly myself that I want all to have some, if it is but one bunch. I get my Ferns whenever I happen to have a chance, no matter what time of year it is. I know they like a damp, shady place, but mine do nicely with only the shade of the house and what water nature supplies, unless, during a long dry spell, I give them the waste water on wash days. I have had some of my Ferns for more than five years, and they are just as nice as ever. I have a rockery, too, but I managed to cover it so thickly with Ferns that the rocks are concealed, for we do not have pretty rocks and stones here, and I do not believe in doing without Ferns just on that account. That was the reason I tried planting in beds—always make the best of what we have, you know.

One day when I went visiting I took with me some bunches of Ferns and planted them in such a nice place, formed by the corner of the house and veranda. While I was planting them the old farmer came out and looked at them, and said he could find plenty just such things in his woods. And when I told him I got them in the woods, and that they were nothing but Wild Ferns, he was astonished that

I should go to the woods for plants when I had so many nice flowers in my yard. He admitted though that they were nice, but he did not know they could be transplanted. Before I left he said he would have a wagon load hauled up for his daughter, if she wished.

So please tell the readers of the MAGAZINE to get the Ferns whenever they can, and plant them without a fear that they will not grow. And now, MR. VICK, please listen till I tell you what my twenty-seven months old baby, GRACE, said of the Pansies, and I will be through. One day she stood admiring a large bunch of Pansies for some time, when she turned to me and said, "Mamma, these Pansies are looking at me!"—MRS. V. P., *London, Ont.*

TALK ABOUT FLOWERS.

MR. VICK :—I am so full of the love of flowers that I never get a number of the dear little MAGAZINE without wanting to talk to you a bit.

Last year my Dahlias, that were before splendid, gave me very poor flowers with abundance of seed. From seed planted this spring I have some of the most beautiful flowers I ever saw. Two, now before me, for delicacy of shading surpass anything I ever saw in Dahlias.

I obtained plenty of seed from my Tigridias last year, and from them I have now nice young plants. My *Yucca filamentosa*, three years old, does not bloom at all.

I have a Dahlia that, when grown on sandy soil, was yellow and white, but grown on an alluvial soil was clear yellow. This year I see some of the flowers are striped with red; it is in a rich, dry soil, a sandy clay.

Does growing Dahlias in a very rich soil tend to give seed, or is it the dryness of soil, or is it some occult influence of the season? Will old Dahlia, Pink, Dianthus, and Carnation seed be more likely to give double flowers than new?

We have many nice wild flowers here, among which is a true Lily—a yellow with black specks, and about the size and shape of the

Canadense in your chromo, but I think a finer color. If you will express a wish, I will send you a bulb. We also have a delightfully fragrant flower, like Crab-apple blossoms, growing on a very beautiful succulent plant, which would be nice for shady places, as in an outdoor fernery, or water rockery. I never saw it described in any catalogue, and I know no name for it—can send you a root.

Thank God for the beautiful flowers and the capacity for loving them. God speed your work.—MISS L., *Montesano, Wash.*

We do not think that a rich soil would have the effect directly to produce more seed, either of a Dahlia or other plant. Neither do we know of any facts to support the idea that old seeds are more likely to produce double flowers, though a good many old gardeners entertain this notion. Very likely the Lily mentioned is *L. pardalinum*.

THE FOXGLOVE.

MR. VICK:—I do not think I have ever noticed a favorite perennial flower of mine mentioned in your MAGAZINE. It is the Digitalis, or Foxglove, and often known as the



Thimble-flower. I have three varieties, two of them very fine, the flowers covering the flower-stem in a regular mass. The other one is more robust in growth, reaching often between four and five feet in height. This, I believe, is *D.*

purpurea, so far as I can learn, and I understand it grows wild in the country lanes of England. I like this flower for its stately beauty, and also because it will bear a good deal of shade; indeed, I think it prefers a partial shade. It certainly grows the tallest when not exposed to full sunshine, and a portion of my garden is so shaded that I am well pleased with anything that will thrive under such circumstances. The *Digitalis* was recommended to me for this purpose, and it answers well. I sow the seed in the spring, and the second summer have good flowering plants. They then flower for several years. The roots can be divided.—EMERY B. C.

HYDRANGEA HORTENSIA.

MR. VICK:—I send you a statement in regard to an Hydrangea plant I have on my lawn. Some nine years since I purchased the plant with one pink blossom of goodly size, and, in order to have it thrive, I planted it in the open ground, where the root now stands, intending to repot it in the fall, as I was assured the plant was not hardy; but by the time cold weather came the plant looked so puny and mean I was disgusted with it, and decided to let it stand and let the winter finish it. I threw some leaves and rubbish over it and thought no more about it until cleaning up in the spring I found it quite dead, as I supposed. But, to my surprise, some time the last of June there came up two sickly sprouts, which made a slight growth by the time the fall frosts came, when I again covered it with straw, putting a box over the straw and filling it with leaves. The next spring it again seemed quite dead, as no life could be found for some distance below the ground, but some time in June it started again, and made quite a respectable growth that season, but no buds or blossoms. The third year I gave it protection, hoping I might yet get it to bloom, but in this I was disappointed, the top having wholly disappeared, and it had to start from below the surface. I was so perfectly disheartened with the whole affair that I determined to give it no further attention, and for four or five winters it was without protection, starting up each year a little earlier, but until the last two years it has given no sign of bud. Last winter's frosts did not destroy the woody fibre, and the limbs came through the winter fresh and green. It came into leaf as early as any other plant on my place, and by the last of June was in bud for blossoming, and from about the middle of July to the present time (Oct. 6) it has been covered with very large, bright, beautiful blue blossoms, some of the clusters being ten inches in diameter. The plant has enlarged to the size of a

washtub. Can you tell me the cause of change in the color?—A. A. M., Rochester, N. Y.

The above is a very cheering statement of what may be done in this locality with the common *Hydrangea*, if sufficient care is given it. We have seen this plant, and think it is at least four feet in diameter. The change in the color of the flowers from pink, when first purchased, to the blue of the present season is not an uncommon action in *Hydrangea Hortensia*; it shows in this manner its susceptibility to the influence of the soil it grows in. Soils of different character produce different colored flowers. Plants may even be made to produce flowers of different shades of color in the same locations by the application of various substances to the soil.

THE WINTER WINDOW-GARDEN.

MR. VICK:—Many of my lady friends enquire of me how it is that my window plants are so fine while they have so poor luck with theirs; they say they always take up the finest plants they have in the fall from the flower-beds, but somehow they never do very well, nor make much show, and as for flowers, they never have any until April. I once had the same results myself as those they now complain of, but as I became interested in your publications, and I have read them for several years, I gradually discovered how faulty all my gardening operations were, and set myself to correct them as much as possible. Although I know I



CHINESE PRIMROSE.

have only just made a beginning, it is, however, so great a pleasure that I shall be satisfied to be a learner all my life. I will give you a short account of my present management for winter plants. I have learned to make my main dependence for flowers in winter upon the Chinese Primrose; there is no plant that will give so many flowers or produce them so constantly from early winter to late in spring. I will not occupy your room in describing how I raise the Primrose, for you have already given very plain directions on this subject; but I will note that I am careful not to let the proper time slip by to sow the seeds every spring, for I do not consider the plants worth much after they have bloomed all one season, so throw them away in

the spring and rear up some new and strong ones. I consider one of the great secrets of success in having fine plants is a care in commencing their cultivation at the right time. I like to sow Primrose seed in April or May, and not postpone it any later, not but what good plants may be raised by later sowings, but they will not have so good a chance and will come on very much later in winter. After my young plants are pretty well started and potted off into small pots, I bring them along by plunging them in a cold-frame; by shading the sash and ventilating I can keep just such a temperature as I need, and it is really delightful to see the sturdy little plants thrive under my care. I wouldn't try to get along without a cold-frame.

Early in July, and when my plants no longer require to be kept close, even at night, I turn my frame round to face the north, and on the north side of my house, and tilt back the sash so as to allow a full exposure to the air, but am always on the lookout for a cold storm or a sudden change in temperature. Of course I am obliged to shade a little on very bright days, but after the first of August this is pretty much dispensed with and a good supply of water every day is the most that they require.

Another plant I fancy very much is the Chrysanthemum, and I make it a steady habit to raise about a dozen good plants every year. From the middle of October until January they supply me with flowers, and at that season there is nothing to take their place. I provide myself with as many plants of white as of all the other colors together, for they set off the colored flowers and make them appear much finer than if there were but few white ones. After my plants have flowered I stand them away in a light place in the cellar, and once or twice in a week give a very little water. About the middle of March I bring them out where they can have more heat, light and water. As they throw up some young, new shoots I make a few cuttings of each kind and strike them in pots of sand under a bell-glass, and then my old plants go to the refuse-heap. The young plants I bring along as well as I can at the window until the weather is warm enough to place them in the cold-frame. I usually pot them from smaller to larger pots three times. By pinching back the shoots I am able to make them grow very strong and full of branches that are in time covered with buds. I generally stop pinching them by the middle of August and let them form their flower-buds. I make much use of manure-water with Chrysanthemums, and find it very beneficial to them. After my plants are well established I give them manure-water twice a week all through the season.

I have never succeeded very well in getting Bouvardias from cuttings, and I therefore buy a few plants every spring and grow them up in my cold-frame. Here I also keep a few zonal Pelargoniums struck late in the spring; by December they are good, thrifty plants, and give me plenty of bloom all winter, for I have found that my plants that have flowered during summer in the flower beds cannot be depended upon for flowers in winter. The variegated-leaved Pelargoniums I remove from the beds when the frosts come, by cutting around them two or three weeks previously and leaving a ball of earth just a little smaller than the pot they are to be placed in; by this operation I find there is a multitude of new young roots just at the surface of the ball and in splendid condition for potting, so the plants hardly feel the removal. I treat my Begonias in the same way, for I turn these out into the open border in spring and find they do beautifully there in summer. My Abutilons, too, I have in the border, and I practice this method of root-pruning on them a little more severely than on most other plants, in order to keep them in check, so as not to get too large for the house; I cut around them about the last of July and again early in September, and in this way keep them within bounds. My Callas go into the border in the spring in the same way, and I pot them about the 1st of September, having cut around them early in August, and they always lift with the surface of the ball covered with young, white rootlets.

I fear I am making what I intended for a short communication too long, and will only say that I have learned that to have good plants in the winter I must begin the spring before to prepare for it; but I take as much pleasure in seeing the plants grow as in blooming, and I think I can attend to my other duties all the better for this daily diversion.

I haven't said anything about my bulbs, which I always have every winter now, but it took me some time to know just how to manage them, and I think I know now as well as ANNA WARNER, only I can't tell it as well as she did in her story, "Gardening in the Family," in the last number of the MAGAZINE. Anybody might know how to raise bulbs after reading that story.—MRS. M. S., *Syracuse, N. Y.*

IVIES FOR THE HOUSE.—Those who have Ivy plants in the open ground that they wish to remove to the house, should do so before the weather becomes cold, and before much fire is used in the house, or the sudden and extreme change will cause the leaves to drop, thereby destroying the beauty of the plant.

THE SALISBURIA.

JAMES VICK :—In the MAGAZINE for September, page 275, I notice some remarks on the Salisburia. I think it is one of the finest of lawn trees for a small place. I have a tree of it here over thirty feet high, and there is not a dead limb or shoot on it. It is perfectly free from insects, and retains its foliage until late in the season. It is said to attain to the height of eighty feet in its native country, Japan. When young its growth is slow, but when well established it grows rapidly, and, as the foliage is so different from other trees, it always attracts attention. Our tree is about twenty-five years old, and, in regard to its fruiting, I quote the following from the *Gardeners' Monthly* for December, 1877:

"Prof. SARGENT communicates the following: One of the Salisburias, planted some twenty



COMMON MIGNONETTE.

years ago in the grounds of the Kentucky Military Institute, at Farmdale, Ky., and now thirty feet high, proves to be a female and has fruited this year for the first time. I am not aware that this interesting tree has fruited before in the United States, while in Europe specimens known to be female are still very rare. Through the kindness of Prof. R. H. WILDBERGER, specimens of the ripe fruit are before me. Its fleshy outer covering exhales an extremely disagreeable smell of rancid butter, but the kernel is excellent, with the flavor of filberts, although more delicate. In Japan the kernels have reputed digestive qualities, and are very generally served at dessert. The cultivation of the "Ginjko" for its fruit is one of the possibilities of American horticulture, and is, perhaps, worth consideration."

S. adiantifolia variegata is a variety with its leaves marked with pale yellow, and is of slow growth.

Is Parsons' New White Mignonette a distinct variety from *Reseda ameliorata*? and is the new Prize Taker an improvement on both? Have you tried the new Spiral Mignonette, and, if so, how does it answer to the description given it by the introducer. *R. ameliorata* is a very good variety, with flowers and foliage much larger than the old species. Are any of the new varieties any improvement on it? If so,

what are their names. If they are no improvement and are not distinct from *R. ameliorata*, the sooner they are rejected from cultivation the better. Of what use are so many varieties of Mignonette? Why not select two of the best and most distinct varieties and abandon the cultivation of the rest.

I must congratulate you on your fine display of cut flowers at the exhibition of the New York Horticultural Society. It afforded me very much pleasure to see them.—C. E. P., *Queens, L. I.*

Parsons' New White Mignonette is distinct from *Ameliorata*. The colored stamens of the latter give the flowers a reddish appearance, but in the former they are white, hence the name. They both bear larger spikes than the old Mignonette, and are stronger plants. The



NEW SPIRAL.

New Spiral we have tried, but have nothing to say in its favor. If either is an improvement on the old kind it is Parsons' New White. The Mignonette, however, is grown for its fragrance, and not for its beauty, and even were this not so, neither of the new kinds could claim precedence over our old favorite on account of good looks. There is no advantage in growing a tall, stiff spike of greenish flowers on a large, coarse plant in place of the old Sweet Mignonette, a small, slender plant, with modest little clusters of minute flowers, a few of which are sufficient to give fragrance to a whole bouquet, and perfume a room. For a score of years we have heard of improved Mignonette, Tree Mignonette, &c., but we like the old sort best. We give an engraving of a plant of the Spiral Mignonette from an English drawing. It shows a pot-plant grown, no doubt, with great care, and also a little engraving of the common Mignonette from a plant grown in the open ground.

QUICK WORK.

MR. VICK :—I purchased quite an assortment of flower and vegetable seeds last spring. I succeeded well with almost everything, but one thing extraordinarily. I sowed a short row of Hollyhock seed about April 1st in a cold frame, and removed the glass permanently and entirely about May 10th. When I transplanted my other flowers I had no decided place for my Hollyhocks, and I left them, about a dozen in number, and now one of them has a flower-stem over fifteen inches in length, one-half of which is covered with large pink blossoms, (I send you a sample exactly four inches in diameter) the other half is not yet out, but is full of buds.

In the vegetable line I planted one paper of Rhubarb seed. I have made several pies this summer therefrom, some of the leaf-stems being over one foot in length, and as to quality, I never had better. It was grown on ground broken last year, and not manured at all.

I have always understood that Hollyhock seed did not bloom until the second year from the seed, and that Rhubarb would not be fit to use until about the third year.—MRS. M. L. J., *Hastings, Neb.*

As a general rule the Hollyhock will not flower until the second summer, but when sown very early in a hot-bed, occasionally a few will be forced into bloom the first autumn.

It is not often plants of Rhubarb will be fit for use the first season, but then our western country seems to disregard all known rules, and what we here consider dwarfs turn our giants, and some plants mature in a few months that in slower places require a year or two.

MONTHLY ROSES.

MR. VICK :—Your valuable MAGAZINE reaches me every month, and I like to learn the experience of others in cultivating and growing flowers for pleasure. I often wonder why ever-blooming, or Monthly Roses are not more grown by lovers of flowers. I procured, last year, one dollar's worth of small plants and put them out at once, and from about the 15th of June till freezing weather in the fall we were not without Roses in bloom. The soil was our natural black soil enriched with well-rotted barn-yard manure. I kept the soil well stirred, or hoed, around them during the hot, dry weather of July and August. I watered them with soap-suds saved from washing-days, and as soon as a blossom was well developed it was cut off, and the result was as stated—a constant bloom of Roses from the 15th of June to the 15th of November, and then they were full of buds and blossoms when the ground froze up. I find no trouble in destroying the insects that infest Roses, by using Hellebore—about a teaspoonful in a pail of water, applied with a sprinkler. I have now, June 1st, Roses in bloom out-doors from cuttings rooted this spring. Let us hear from others.—J. R. W., *Evansville, Wis.*

DOUBLE PHLOX.

MR. VICK :—Among the seed I obtained last spring was a paper of mixed Phlox. I planted them and now have among them a most beautiful double white Phlox. As it is the first I have seen, and you have none advertised, I suppose it will interest you almost as much as it does myself.—F. G. C., *Hillsboro, Texas.*

WATER LILY.

MR. VICK :—A Water Lily planted last spring has had nineteen fine blooms. I put the lily-tub where it got the full blaze of the sun, filling up with water as required. One root that I had formerly and kept in the shade would not blossom after the first year, and only three times then.—T. W. H., *Baltimore, Md.*



AUTUMN LEAVES.

Purple, and yellow, and scarlet,
The trees in their autumn array,
Are lighting the fields and woodlands
With their coloring rich and gay.

Standing in sunlight and shadow,
Bright beacons of beauty and cheer ;
But telling, leaflet by leaflet,
The pulse of the dying old year.

Purple, and yellow, and scarlet,
They are fluttering gaily down,
And decking the grave of summer
With a gold and jewelled crown.

When the autumn of life approaches,
As at last it must to us all,
Oh, then may we have the beauty,
The glorious tints of the fall !

The purple of resignation,
The yellow of hope and of cheer,
And the rich, enduring scarlet
Of the love that "casteth out fear."

LUCY WADE HERRICK.



BULBS.

A Gloucestershire parson writes in the *Journal of Horticulture* about bulbs:

How tempting they look in the seed-shops as you pass by and see the boxes full of Hyacinths, and Crocuses, and Tulips, and Narcissuses! How pleasant it would be to go in and buy just what one chose of the fine round rich-looking bulbs of all sorts, "regardless of expense," and carry off the booty to the shades of the potting-house for the future decoration of greenhouse and home; but it must not be. Bulbs are expensive, as they ought to be, when you think of the toil, and labor, and risk incurred in Holland and Belgium in their production; still we may look at them at least, for they are beautiful in themselves in an artistic point of view.

But all bulbs have a peculiar interest of their own, though they are so various in their flowers and in their mode of treatment. There is no arguing from what will suit one to what will suit another, like the boy who argued with his father that he would like, when he was grown up, to marry his dear, good, kind grandmother in this way: "You married my mother, why should not I marry yours?" The same rule will not always apply to bulbs more than in marriage, except that most of them like plenty of water for their growing season, and then a dry, or moderately dry, time for their season of rest.

Bulbous flowers are so kind in coming early to remind us of approaching spring. Snowdrops grow wild plentifully in this country, so with the first perceptible lengthening of the days we can gather handfuls of them if wet ground is no objection. Children fill their hats with them, and you see them in every cottage window. They have not reason for having the same color as their snowy surroundings like the Scotch hare, and the Arctic fox, and the Polar bear; but it seems appropriate that the first flower of spring should look snowy. And they linger on so long—long enough to greet their gorgeous-colored friends the Crocuses. Plant Crocuses by hundreds and you will not be sorry

in the bright sunshiny days of treacherous March, when the east wind is blowing bitterly one side and the sun shining brightly on the other side of the hedge. I have heard of a good clergyman who used to give a Crocus party just at the time when his garden was gay with their purple and gold. They must be grown in sufficient quantities, if possible, to give sheets of gold in broad belts of their glittering cups, or in complete circles, as is most convenient.

MR. GLADSTONE AND GARDENING.

Mr. GLADSTONE, the great English statesman, devotes his attention in part to horticulture, and uses his influence in this direction for the benefit of society. At a late show of the Horticultural Society of his locality he gave the use of the park in which the show was held, and Mrs. GLADSTONE distributed the prizes. In response to a vote of thanks, Mr. GLADSTONE made some remarks and called the attention of those present "to the great and increasing importance of that which might be called garden cultivation." Some statistics were given showing the value of some of the fruit and vegetables imported into the country. About three millions of pounds, or fifteen millions of dollars worth of vegetables were brought from abroad. "He thought it was an excellent thing that the labor of this country was in some shape or other exchanged; that employment was given to the people in producing commodities to be given in return for the fruit and vegetables so imported. Still, on every ground, he should like to see this fruit and these vegetables grown at home."

Mr. G. made some allusions to recent publications on horticultural subjects, and among other things said: "For example, in the book from which he was quoting, a weed was described as a thief and a robber, and it was a correct description. For what was a weed? It was not merely a thing that was useless, but a thing that was destructive; it took away that which ought to go and which was capable of going to something else that was useful. It not

only took that to which it was not entitled, but it took away from something else that to which that thing was entitled. As to robbers of another kind, they looked to the police to look after them; but these weeds were not a bit less truly robbers, and a sufficient number of weeds would rob them of a considerable sum. The probability was that weeds in this country robbed farmers and cottagers of a great deal more than all other robbers in the land put together. The same book said they should never let a weed go to seed, and that was a sensible observation, for it was said, "One year's seed, seven year's weed;" and whether or not it was the exact figure, he believed it was the truth.

"He hoped they would think more and more of this subject of garden and spade cultivation, for they might rely upon it there was a great deal to be done with it.

"The subject on which he had spoken was one intimately connected with the comfort and advantage of the people, with the refinement of their taste, with the happiness of their homes, with the substantial well-being of their lives, and he was very glad to see that its importance was becoming more and more recognized, not only by writers, but by those who were actors, and by none more than the cottage-gardeners."

TOMATO DISEASE.

The Tomato in England appears to be affected with a disease similar to that of the Potato, even if it is not absolutely the same. A. D., in the *Garden*, writes :

The identity of the Potato disease with that which affects the Tomato is unquestioned. The plants are members of the same family, and evidently subject to the same diseases. It is only within the past four years that the disease has shown itself upon the Tomato to any appreciable extent, but last year it was so destructive that acres of plants were destroyed ere a ripe fruit was produced. When it is thus prevalent, plants grown in the open ground—that is, trained to stakes or laid on straw—have no chance whatever. It generally shows itself in the Tomato as soon as the Potato haulm has disappeared under its destructive operations, thus showing that it prefers to exist upon the Potato before it attacks the Tomato. This year Tomatoes are very late, and the prospect of getting a crop of fruit is rendered very doubtful by the gradual progress of the disease over the leafage. As for a remedy, there is none at present, and the only way to get a good crop is to grow Tomatoes under glass. Even here, however, if much exposed to the air or especially to drip, the disease will soon show itself. I found it to be so last year under frame-lights,

and the same indications of the disease in the Potato under glass were also shown where there was drip. That the minute spores of the germs of the fungus are carried in the air and in rainfall there can be little doubt.

COAL-ASH WALKS.

Good, sound, dry walks are a necessity in all garden grounds, in order that the work in them may be carried on with comfort during all weathers, and although there is nothing like good gravel for walks in pleasure grounds, it frequently happens that, from the difficulty of getting gravel in quantity within a reasonable distance, the kitchen garden walks have to be made of what is most abundant. After trying all sorts of materials in different counties, it was found that nothing makes a better path than ashes. The way in which we use them is to form grass verges one foot wide and about one foot deep. In the bottom of the walk are put brickbats, stones, or other rubbish. On these a good layer of clinkers is spread, and broken down tolerably fine, when a good coating of ashes is spread evenly over the surface, and rolled down. These form one of the pleasantest paths on which to walk, wheel, or cart that it is possible to have. Weeds are not troublesome, for the material has been cleansed by passing through the furnace, and if a few seeds blow on to the surface and germinate they can be easily removed.—JAMES GROOM, in *The Garden*.

POTATOES IN EUROPE.

The Potatoes in England and Ireland, and in many parts of Europe, are nearly ruined by the unprecedented wet weather. Several of our friends just returned from European voyages state that in the English markets, and on the Atlantic steamers, the Potatoes were remarkably small and poor. In Western New York we never before saw the Potato crop so excellent, in both quantity and quality. Our produce dealers are making arrangements for shipping across the Atlantic our surplus, which must be very large. The wholesale price for best quality here is now thirty-five cents a bushel, and perhaps we may export to advantage.

FUCHSIAS AMONG ROSES.

A correspondent of the *London Garden* had some of his standard Roses killed by the late spring frosts, but having some large Fuchsia plants they were used to fill up the "ugly gaps," and the result was a pleasant surprise. They stood the rough weather well, and vied with the Roses as to quantity of bloom. The writer says: "If all is well we shall use Fuchsias more extensively next season."



PLEASANT GOSSIP.

WINDOW GARDENING IN NEW HAMPSHIRE.

MR. VICK:—I am very much pleased with that part of your MAGAZINE devoted to correspondence, and I wish to avail myself of its advantages to ask a few questions. It is only a short time since I commenced cultivating house plants. At first I had only a few, now I have about sixty, among which are the following kinds: Zonal Geraniums, Pelargoniums, Fuchsias, double and single; Petunias, Heliotrope, Smilax, Ivy, Maurandya, four varieties of Oxalis, Calla, Begonia, three Lantanas, and several others. For soil I use leaf mold, good, rich garden loam, a little sand, and a little old stable manure. For my Roses and Calla I make it a little richer with Bowker's phosphate.

1. I wish to know if this soil will suit all the plants I have named?

2. My Heliotrope has the black rust and the leaves are all falling off, and I find that almost every one that I know is troubled in the same way. What is the cause, and what will prevent it?

3. What can I do to keep the little white flies away from my Fuchsias?

4. Can I grow a Cypress Vine in the house this winter and have it bloom?

5. Do Double Petunias require more water than the single ones?

6. What is the best treatment for Pelargoniums? I have one over a year old and it has never bloomed. All my others are cuttings just started; I have nine varieties altogether.

7. Are there any of the above-mentioned plants that will not be benefited by the use of liquid hen manure?

8. Do you think I will succeed in keeping all these plants in my kitchen this winter, if I give them plenty of fresh air and a good showering once a week?

I am passionately fond of flowers and wish to grow them successfully, and, I have no doubt, in answering my questions you will meet the demands of many others. I was much pleased to know through your MAGAZINE that one lady has grown Chinese Pinks in the house with success, for I have a beautiful bed of them this summer of about forty varieties, and wish to take some of them in this winter.—MRS. G. N. C., *Hancock, N. H.*

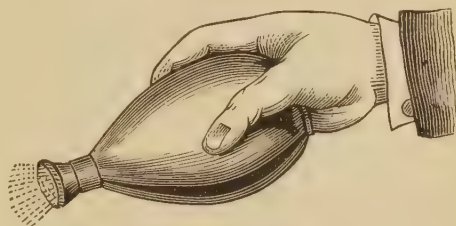
1. The soil described is a very good one and well adapted to the plants named.

2. The black rust on the Heliotrope is undoubtedly a fungus, and perhaps very similar to that affecting the Verbena, if not identical with it. There is no effectual remedy for it; dry flowers of sulphur is often sprinkled over the leaves, but it proves to be only partial in its effects. Rust on plants is frequently caused by extreme and sudden variations of temperature, and particularly by drafts of cold air. A plant once affected by rust is almost worthless, and

the course adopted by the best cultivators is to discard such a plant and start again with a young and healthy one.

3. If the foliage of young plants is sprinkled or moistened with a fine spray of water every day the little insects you mention can scarcely do them any damage. The best implement for this purpose we know of is the elastic plant sprinkler.

4. It will require very good management to bring a Cypress Vine along from the seed in the winter and get it to flower before spring. It is a plant that requires a steady and high



ELASTIC PLANT SPRINKLER.

heat, a condition that will be difficult to maintain, and not desirable for most other plants.

5. We have never found any difference in Petunias, whether they had single or double flowers, about the amount of water required.

6. With Pelargoniums, as with other plants, the point to be aimed at is to produce fine, healthy specimens; this should be the great object of the cultivator, and the bloom will come when the plant is prepared for it.

7. The liquid manure should be used with caution, making it quite weak, and only upon those plants that appear to be deficient of vigor.

8. With the interest you manifest in floriculture there is no doubt but you will have some fine plants and beautiful flowers to reward your efforts.

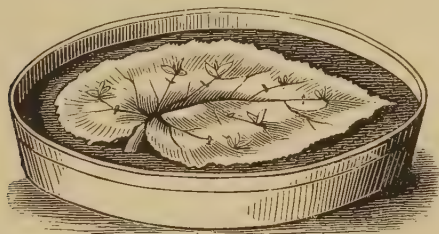
JAPAN COCKSCOMB.—I had a Japan Cockscumb that was a real beauty, so I took it up carefully, put it in a large pot, kept it in the shade a few days, and it looks as though it will be handsome all winter. Have had it potted about a month.—EVELINE.

RENOVATING AND PROPAGATING PLANTS.

I wish to know how to manage a large plant, for instance, an Hibiscus. After having moved one from one sized pot to another until it is in as large-sized one as can be managed; is there no other chance for it then, than to allow it to become pot-bound and thriftless? When a plant is shifted to a larger pot, ought it to be put into the larger pot without touching the roots, or should they be trimmed?

How is Begonia Rex propagated?—C. D. K., *Pearlington, Miss.*

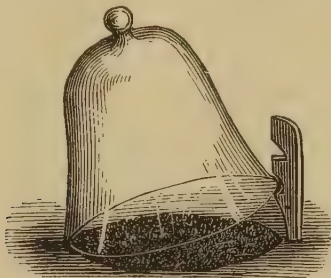
When a plant that has attained its full size is to be kept over and it is desirable to give it a new start, it may be managed either by removing a portion of the surface soil, without materially disturbing the roots, and replacing it with fresh, rich soil, and afterwards sustaining it with liquid manure. This course is especially ap-



PROPAGATING BEGONIAS FROM A LEAF.

propriate to a plant approaching its blooming season, when any more severe dressing might retard its bloom or cause it to drop its buds. An old plant at rest may be turned out of its pot, the soil shaken out, the roots cut in, the head pruned back, and then be repotted with new soil, in a pot the same size it previously occupied.

Begonia Rex, as nearly all the Begonias, may be propagated by what is called leaf-cuttings. A leaf has its stem cut so that a small portion of it remains, and this is then inserted in a pan of moist sand and the leaf laid out flat upon the sand, its upper side uppermost. The



BELL GLASS.

leaf is retained in position either by two or three bits of small stone or crocks, or what is better still, by some small pegs inserted so as to cross each other over some of the large veins. Cuts are now made in a number of places, so as to sever, or partially sever, the veins; this checks the flow of the sap and a callous forms and throws down roots at the base of each

piece of vein where severed, and just above it a bud starts out, and thus a new plant is formed. A single leaf may produce in this manner a



LEAF OF BRYOPHYLLUM FORMING BUDS.

half-dozen young plants. The facility with which propagation is performed in the manner here described depends very greatly upon the surrounding conditions. It is almost always necessary that there should be bottom heat, and it is absolutely essential that the air should be still and moist. It is customary to place leaves on a pan of sand, which, standing on a bed that is heated beneath, is then covered with a bell-glass, or the pan is placed in a gentle hot-bed. The leaves that are used for this purpose should be neither very young nor very old—those that are nearly full grown and still vigorous should be selected.

There is danger that the air under the bell-glass may become too moist, and watch should be kept and the glass tilted up when necessary to allow the escape of the superfluous moisture. A thermometer plunged in the sand on which the leaf is lying should show a temperature of about 75°.

Gloxinias, Gesnerias, Echiverias, and other plants besides Begonias, are raised in the same way. Some leaves, like those of the Bryophyllum, form buds and emit roots freely along their margin.

DOUBLE PORTULACA.

Can you tell me how I can have double flowers of Portulaca? My double flowers have no seeds; they are only double one year. How do you manage to get the seeds to have them so double? Please let me know.—Mrs. N. T., *Ryersville, N. Y.*

You will sometimes find a few seeds in double, or nearly double flowers. We save seeds from the very best of the semi-double.

EREMURUS ROBUSTUS.

MR. JAMES VICK:—Please tell us what you know of *Eremurus robustus* in due time.—D. C. Y., *Sonoma, Cal.*

Eremurus is a liliaceous plant from Turkestan and the east, with finger-like tubers and a flower-stem often reaching ten feet in height, and covered a good part of the way with star-shaped flowers. The leaves resemble those of a Tritoma.

DODDER.

MR. VICK:—I enclose what seems to me a curiosity, or a freak of nature. Some two months ago, on a Rose Geranium which was standing on a stand on a piazza, I



discovered a running vine without any leaf, which I first thought was a German Ivy, as one was standing near it. I pulled the vine from the Geranium, and in a week or more I found the vine again on the plant, only more of it, but could not after a thorough search find a beginning or root, as it was all on the top of the plant, which is eighteen inches high. At last I determined to separate it from the plant, if possible, and

made a business of it, and thought I had succeeded, when what I send you appeared upon the plant in various places. There is no vine now upon any part of the Geranium. I send you a sample as it now appears on the plant. I would be glad to know more about it, if not trespassing upon your time.—Mrs. L. C. P., Neenah, Wis.

The specimen of Geranium received by us had growing upon and around the stem, and upon one of the principal veins of a leaf, masses of small flowers closely clustered together, the appearance of which is very correctly represented by the annexed engravings.

The vine our correspondent mentions was the stem of the Dodder plant, *Cuscuta compacta*, and the thickly clustered flowers are the flowers of this vine. It is customary for



the stem of this plant to throw out roots and fasten them in the plant upon which it is growing, and to derive its nourishment from it; after this the lower part of the stem decays and the Dodder lives entirely upon the plant that supports it. In many places it is a great scourge to the Clover fields, and is often so bad that it is necessary to plow the crop in to destroy it. The Dodder, of which there are several species, is a member of the Convolvulus, or Morning Glory family, but, as we have noticed, is very different from its other members in its mode of life; the different species of it seem to prefer different kinds of plants, but all are pests.

TENDER BULBS.

MR. JAMES VICK:—Among my collection of plants I have the following named bulbs: *Crinum amabile* and *Americanum*; *Pancratium rotatum*, *grandiflorum* and *fragrans*; *Eucharis Amazonica*; *Amaryllis alba*, *Johnsonii*, *regina*, *Prince of Orange*, *aulica*, *Valotta*, *rosea*, *Atamasco*, *formosissima*, *vittata*, *Nerine* and *Blanfordia*. As the cold months are approaching I would be pleased to have you inform me as to what mode of treatment is best for them. As yet (this year) none have bloomed but *Amaryllis regina*, *rosea* and *Atamasco*. State if any should be taken up and dried off, as the *Gladiolus*, or left in the pots, as the *Spotted Calla*. Also what ones may be expected to bloom during winter. Any information you may give either of all or part will be thankfully received.—J. M. McC., Butler, Mo.

The bulbs named above will do much better if not removed from their pots or allowed to dry off. The *Crinum*, *Pancratium*, *Amaryllis* and *Eucharis* make their greatest growth during the winter, commencing soon after the 1st of January. While growing they should have a plentiful supply of water, and this should be maintained during spring and summer. Their season of rest should be in the fall months, and then, though not allowed to become dry, they should be comparatively so.

Nerine and *Blanfordia* are usually so treated that their season of most active growth is in autumn, say from September to January; after this time, and until the latter part of spring, they should not be allowed to flag for want of water. About the 1st of June the water can be in a great measure withdrawn, and a period of rest allowed for about three months.

PANSIES ON THE MOUNTAINS.

MR. JAMES VICK:—Allow me to hand you a few samples of Pansies raised by Mrs. CORSON here, 9,000 feet above the sea-level. She has upwards of thirty-two varieties, which have been the admiration of all visitors. We think these specimens could not be excelled. Besides the Pansies we have oceans of flowers, *Phloxes*, *Petunias*, *Verbena*, *Alyssum*, &c., all most beautiful. Strange to say, go where you will through this San Luis valley, you will never see out-door flowers; people imagine they will not grow. I must say, however, that many there have great success in window-gardening, which we cannot do, as the frost is too severe, being often 25° below zero—a frame house, although plastered, cannot withstand that.—R. C., Willowdale, Cal.

The samples of Pansies received were very large and remarkably fine in form and color.

SEDUM PULCHELLUM, AN EDGING PLANT.

MR. VICK:—Herein I send a specimen of a plant for bordering, which I cultivate, and which, if you will name for me you will very much oblige. I think it a kind of Moss, or Pink, as it has a creeping root and increases rapidly. This is a late flower-stem, as it commences blossoming in July. The flower-stems are taller than the others, growing some four or five inches in height, while the others grow but three or four.—Mrs. E. R. T., North Granville, Vt.

The plant received was *Sedum pulchellum*, a hardy little native, and serves a very good purpose for edging.

GARDEN INCOMPLETE WITHOUT ANNUALS.

DEAR FRIEND:—For as such I must consider you after my summer's success with your flower seeds. Last spring was unusually unfavorable for planting seeds, being first cold and late, and afterwards dry and the ground hard. But I persevered until I got some of nearly all kinds sprouted, and for months my large flower garden has been the admiration of all who have seen it. I had already a very large and varied collection of Dahlias, many of the original bulbs procured years ago; monthly and old-fashioned Roses, shrubs, Geraniums, Lilies, tubers of many kinds, in fact, nearly all the standard shrubs and plants common to our vicinity, and needed only annuals to make my collection complete. Although I was able only to plant in the natural soil, I have succeeded so delightfully that I cannot feel satisfied without telling you, who sent me without a single mistake just what I asked and paid for. There is some use in sending for seeds and plants when one gets the identical things desired. Please send me one of your latest catalogues, as I wish to make my selections in the fall that I may have a good ready for spring. I did not lose a single plant of those you sent me in moss; but my white Geranium has never bloomed. Please tell me how to make it.

My Water Lily not only grew and thrived but bloomed. It was a curiosity to many here.—M. E. B., Franklin, Ind.

This is a very gratifying report, and is one of many similar that we receive as offsets to the grumblers.

It is curious enough to receive in the same mail a letter complaining that this, that and the other kind of seed will not grow, and must be bad, and the very next letter will be a statement of almost wonderful results from the very same kinds of seed, and that were of precisely the same lot. The fact is, a little care and proper attention is necessary to germinate seeds; these must be given or the labor will be lost.

The White Geranium referred to will blossom when it becomes a strong plant. Try to make as thrifty a plant as possible of it and it will bloom in time.

PANCRATIUM OCCIDENTALE.

MR. VICK:—In the February number of your MAGAZINE, "Reader," London, O., asks about the treatment necessary to secure blooms on his *Pancratium Mexicanum*, and I will give you a description of its habits in its native wilds, and you can advise a treatment similar to that pursued by nature. The *Pancratium occidentale*, which is, I suppose, the same he has, grows in poor, sandy soil, which is here called "post-oak land." It does not bear removal well, and will not bloom in three or four years. The leaves come up about the 1st of March, being from one to two inches wide and six to fourteen inches long, according to the age of the plant. The leaves are the same size all their length, just rounded off at the end; they lie flat and evenly together like a folded fan. About the last of June the leaves die, and after the first rain in August the flower stem comes up. There is no sign of leaf—only one, two, three, or four stalks, each one containing from four to a dozen of the pure white flowers. If there is no rain in August, which is often the case, there are no *Pancratium* flowers. I think it of the same hardiness as other Lilies, and if they can stand the weather out of doors, I think if Reader will entrust it to the kind protection of mother earth, and the fostering care of nature, he will

not have to ask if it is worth keeping—it will answer for itself. I sent you a bulb of the *Pancratium occidentale* some years ago. I did not know the name then and called it *Lilium Texanum*. I have never learned its fate; but a lady in Vermont, to whom I sent one at the same time, wrote me, in 1877, hers had bloomed.

Will you give us poor people, so well described in your oft quoted expression, an idea how to make a fernery. Perhaps you do not know! Oh! yes, you know, your knowledge is inexhaustible. Well, our climate is so dry that we have no native Ferns in this portion of the State, and, wanting a cool bit of greenery, I intend to have a fern-case made, and fill it with contributions from my floral friends who live in States more highly favored in that respect than this is.

Excuse my volubility. I feel as if you are such an old friend. I was struck with what "Aunt Fanny" said about seeing your flowers. I feel as if I should exclaim, like the peasant girl on entering the palace, "All this, and a chance of Heaven besides!"—MRS. M. C. A., Maysfield, Texas.

Pancratium Mexicanum is a synonym for *Hymenocallis adnata littoralis*, a South American bulb, and is not identical with *P. occidentale*. The *Pancratiums* in our section are not hardy and cannot be left in the open ground in winter. They should be raised in pots and seldom be disturbed. About mid-winter the bulbs can be started into growth, and after making their foliage should be kept watered and growing freely until midsummer, when they may be gradually dried off and then have a season of rest.

The information desired about ferneries may be found on another page.

HOUSE PLANTS.

MR. VICK:—Can you spare a little corner in answering a few questions?

1. Why did my Geranium buds turn yellow and drop off last winter. Did I keep them too wet or too warm? They grew nicely, and only Little Fred had blossoms.
2. How old must the Amaryllis be to blossom? I have one that has thrown off six bulbs, but does not bloom.
3. I have eighteen small Geraniums raised from seed from my own Geraniums. Do they have different blossoms, or will they be the same as the parent plant?
4. Do Pine Apple Geraniums blossom? I have one five and one-half feet high.—N. H., Lake Zurich, Ill.

1. Perhaps the plants may have been kept both too wet and too warm, but as they grew well, the probability is that you may not have given sufficient ventilation to secure their vigor, and also kept too high a temperature, and did not attend to syringing the foliage.

2. Amaryllis bulbs will bloom in three to five years from the offset, according to the varieties and the cultivation they receive. The offsets on your plant should be removed, as they weaken the parent bulb. They can be taken off and potted singly.

3. Seedling Geraniums are different from the parent plant.

4. All Geraniums, Pelargoniums, will blossom in the proper conditions.

THREE GOOD CLIMBERS.

A correspondent mentions several valuable climbers to which we have not called the attention of the readers of this MAGAZINE. It must be remembered that the next number completes only the second year of VICK'S MONTHLY MAGAZINE, and that there are thousands of good flowering plants worthy of notice. In good time we hope to say a good word for all we deem worthy, but if any of our friends desire to bring to notice special favorites we shall be pleased to accommodate them when it can be done with justice to our readers.

DOLICHOS.

The *Dolichos Lablab*, commonly known as the Hyacinth Bean, is certainly a vigorous and beautiful climber, and one well adapted to our climate, for it seems to luxuriate in the hot-



test, dryest weather. The flowers are purplish, growing in clusters, like the Scarlet Runner, and the seed-pods are as handsome almost as the flower, for they are dark purple and shine as though varnished. Seed should be planted about the time of Bean and Corn planting. Height from ten to twelve feet. The tops can be pinched off to stop their growth. Provide good support early.

THE LOASA.

The Loasa is a good climber, with curious and handsome yellow and red flowers, which are borne in great abundance. The branches



are covered with fine, stinging hairs, so care must be used in handling. It is a native of

South America and is not often seen in American gardens.

ABOBRA.

The *Abobra viridiflora* is a pretty climber with delicate foliage, small and inconspicuous



flowers, and oval, scarlet fruit, the appearance of which is shown in the engraving. The fruit is very pretty, and to this the plant is indebted for most of its beauty.

WHITE FLIES ON HOUSE PLANTS.

MR. VICK :—I have waited until my patience is nearly exhausted thinking that I would not trouble you, but now, you see, I have to come to you for advice. Will you please tell me in your next number of the MAGAZINE what to do with a little, pesky, white fly that has bothered me very much? The flies lay their eggs on the under side of the leaf; I have tried almost everything and I cannot get rid of them. They are on the Lantanas and Salvias, and the Calceolaria; they have almost destroyed some of them.

It would be needless for me to tell you that I have enjoyed your publications very much and have received much information from them; the most I regret is that I do not have the means to send for all you advertise, but the old saying is, "if it were not for hope the heart would break;" so I keep on hoping that I shall some day be able to astonish you by sending for your nice books and plants.—MRS. A. P. C., *Dexter, Maine.*

What the white flies are that are referred to here we do not know, and, therefore, can only offer some general advice. A dry air and heat are favorable conditions for the production of insects, and usually quite unfavorable for healthy plants. A moderate temperature and moist atmosphere is suited to most plants, and is a poor state of things for insects of any kind. Hence the evaporation of water in a room where plants are kept, and washing, syringing or sprinkling their leaves with water, make it very difficult for insects to breed. Attention to this one point will always keep insects in check. But now they are on the plants, begin with destroying all the eggs with thumb and finger when they can be found, and, as a pretty destructive agent, use whale-oil soap, in the proportion of one pound to seven or eight gallons of water, and wash or dip the plants in this mixture. After this give constant

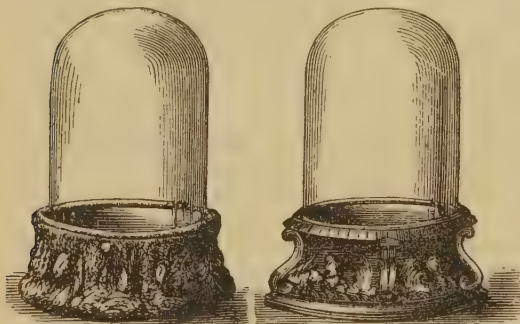
attention to the use of water as previously mentioned.

We hope our friend will not worry for what is not just now attainable. Our great desire is that people should derive comfort from the cultivation of plants and not that they shall be to them a source of unsatisfied longings. If only a few plants are to be had, or if we are even limited to a single one, how much satisfaction can be taken by developing that one to its highest capacity? Let us enjoy what we have and still not relinquish a healthy desire for more; this is contentment but not lethargy.

FERNERIES.

Can you give me any instructions for constructing a fernery, or inform me what can be procured for this purpose.—MRS. T. B., *Cheyenne, Wyo. T.*

We here present illustrations of several styles of ferneries that are in the market and can be



procured of the dealers in such goods. The two smaller-sized cuts represent bases with flat bottoms to set upon a table or stand; these bases are in pottery and of handsome designs. A larger one is shown in imitation of oak, in rustic style, with foot; these bases are of differ-



ent sizes, from eight to twelve inches in diameter, and the whole height, with glass, from twelve to eighteen inches. Although these are

small, still they serve a good purpose and are easily handled and managed.

A more elaborate style, with a table-like base on four legs and castors, is also shown; this represents a fern-case sixteen inches in width by two and a half feet in length, and twenty-six inches high above the legs. A fern-case of



this kind can be made by any joiner, and the design can be varied to correspond to any style of furniture. The top is made to open to get access to the interior, and also to provide for ventilation. Within the wooden table-frame is fitted a zinc pan about three inches deep, which contains

the soil; this pan has an opening for drainage, and a shallow vessel should be placed in a concealed position underneath to receive any surplus water.

With these hints we think our friends will have little difficulty in securing ferneries of such styles as they may fancy.

DOUBLE GERANIUMS BECOMING SINGLE.

MR. VICK:—I would ask what I can do to prevent my double Geraniums becoming single? The old kinds I have no difficulty with, they remain double. In the spring I bought some choice new ones, and some of them have become entirely single, and others nearly so.

Can you tell me the cause of the Heliotrope leaves turning black at the edges? I can never find any insects upon them.

I would also like to know why my *Myrtus communis* does not blossom? I have had it three years, and it has never had a blossom bud upon it, yet it seems healthy and I keep it clean.—MRS. S. M., *Nevada, Iowa.*

Your Geraniums becoming single is an evidence that they are not proper varieties—that is, they are not fixed or permanent, and are unworthy of further attention.

Heliotrope leaves appear to be very delicate. If they have been exposed any night to the least frost they will show it. A sudden exposure to cold drafts will sometimes cause the leaves to blacken, and they are very sensitive to tobacco smoke.

We should try the Myrtle out in the ground next season, either turning it out of the pot into a somewhat shady place in the border, or else plunging the pot below its rim. You do not say how it has been kept.

ROCKY MOUNTAIN COLUMBINE.

MR. VICK:—I have with great care and attention, and with an expenditure of some time and money, succeeded in getting seed of two of the most beautiful flowers that I have seen in this country, at an altitude of over 12,000 feet above the sea level, on the Mount of the Holy Cross. The red and white flowers are much smaller than the blue and white ones, but they are beautiful. My attention was drawn to them by the great number of Humming Birds that were feeding on them. They look like the Honeysuckle. I am at a loss to know their true name or value. We have frost at this altitude the year round. This season the floral display was grand even to the mountain tops.—R. McD., M.D., Leadville, Colo.

With this letter was received a specimen of *Aquilegia cærulea*, or Rocky Mountain Columbine, a most beautiful flower, and of which we have already given our readers a colored illustration; the red and white flower referred to is undoubtedly another *Aquilegia*, and if our enquirer had only known what he was admiring, he could have learned that the seed of both kinds of flowers could be obtained at less expense of seedsmen than it cost him to collect them—but then he would not have had the pleasure of gathering them.

CORAL PLANT AND PETUNIAS.

MR. VICK:—As I am a new beginner, and have not seen any reference to the Coral Plant in your books, and as I have a very nice one, will you please inform me if it has to be taken into the house in winter, and how to treat it?

Do Petunias come up again next season without seed? —MRS. C. H., Brooklyn, L. I.

We suppose it is intended to be asked by the last question, if the Petunia starts in the spring from seed dropped on the ground from plants growing there the year previous. In this climate, or that of Brooklyn, if any young plants should start from self-sown seeds they would be usually destroyed by the frosts of spring. The Petunia is a delicate plant and will not bear any frost.

The Coral Plant, by which, we suppose, is understood the *Erythrina*, must be taken up and the fleshy roots stored away like Dahlia tubers until the time for spring planting. The top, or branches, should be cut away. It may also be potted at once and kept growing in the house.

THE CLOSED BLUE GENTIAN.

MR. VICK:—I enclose a wild flower and part of stem of a plant that I found growing in the woods, or rather in the bushes, in moist, sandy land. It never opens its flower, but remains as you see it now. It is of a deep blue, tinged with purple. It remains closed until the seeds are ripe, after which the petals open a little and let out the seeds. It is odd and pretty. Can you give me its name?—E. W. K., Glens Falls, N. Y.

The specimen received with this inquiry is a Closed Blue Gentian, or *Gentiana Andrewsii*. This flower is one that is said never to expand its corolla, and has been used as an example to

prove that the method of nature is generally to fertilize the ovaries of a flower by the pollen from its own stamens acting through the medium of its stigma and style. Dr. DARWIN, that most critical observer of nature, holds, as is well known, to a position exactly opposite, or that, as a rule, flowers are fertilized by the pollen from other flowers and not by that of their own. The pollen is supposed to be conveyed from one flower to another usually by insects, or by the wind. Dr. GRAY accepts this theory, supported as it is by a great array of facts. In reference to the plant now under consideration he says: "*Gentiana Andrewsii*, it is said, never opens at all in America. It opens in sunshine in the middle of the day here in New England. And while looking at closed flowers we have seen a humble bee emerge from one."

A SOUTHERN PERENNIAL.

MR. VICK:—I send the seed, seed-pod, and half of an interesting plant which I found growing wild in this vicinity. I do not remember having seen it in bloom. The stalks grow from three to four feet high, and the root is perennial. It may be poisonous. I think it will interest you.—W. T., Concrete, Texas.

The plant described is a legume, and is not poisonous. Its name is *Erythrina herbacca*; it grows from Carolina to Mississippi and westward. The scarlet seeds are very handsome, and the pea-shaped flowers borne in March and April are about two inches in length and of a bright scarlet color.

AUTUMN BERRIES.

While our readers are gathering the autumn leaves it will be well to remember the autumn berries. The fields and gardens afford a choice collection of curious and beautiful berries. The Virginia Creeper gives clusters of purplish-black berries; the Bitter Sweet, orange and scarlet; Euonymus, orange and purple; the Snow Berry, elegant, icy berries, looking almost like marble, while our fields abound in many kinds of Thorns. We only design to remind our readers to search for the berries. They will make bouquets of real beauty. We have been gathering them for a colored plate, which we shall publish in the MAGAZINE as soon as completed.

While on our search for berries, we of course visited the grounds of ELLWANGER & BARRY, of this city, where is to be always found a world of horticultural treasures, and were kindly supplied with a collection that we have never seen excelled anywhere. Although we cannot give the English Holly, we think our readers will be both pleased and surprised, when our colored plate is published, to see what a wealth of berry beauty we have, and how little it is appreciated.

GARDEN LUXURIES.

Nature and a little attention to gardening, with a very small piece of ground, and perhaps I might add, a little skill, will provide a family with luxuries for the table all through the summer, and at a cost so trifling as hardly to be worth consideration. I was thinking to-day, as wife announced that we had reached about the last mess of Evergreen Sweet Corn, what a feast we had enjoyed from April to October, in one line of vegetables, and then I thought further that perhaps the information might be of benefit, if published, so I send you this scrap.

I think it was about the middle of April we commenced cutting Asparagus, and we did not tire of this or stop cutting until about the last of June, when the early Peas were fit for pick-



EARLY AND LATE PEAS ON SAME STICKS.

ing. I had three varieties—early, middle and late, following in a nice succession. I took no note of dates, but think we enjoyed the Peas until about the middle of August, when the Minnesota Corn was fit for the table, followed by a later kind, and these by Evergreen. I think I might have spent hundreds of dollars for my little family in costly luxuries that would not have afforded so much healthful food and such real pleasure as we obtained in the manner described, and almost for nothing.

In some of your books, a long time ago, I saw a plan described of growing an early and late kind of Pea in the same row, or a row of each to climb on the same brush. I tried that method this season, making a row of early Peas and a row of late, eight or ten inches apart, and putting the sticks or brush between the rows. The result was quite satisfactory. When the early kind was gone the late had the brush all alone.—S. B.

PERENNIAL LARKSPURS.—A bed of Perennial Larkspurs in full flower gives a show of beautiful blue and purple color that nothing can equal.

DAPHNE CNEORUM.

Allow me to call the attention of your readers to a very handsome little plant that I have watched all summer. It is growing on the grounds of one of my neighbors. I noticed it in flower early in the summer, and a few blossoms were seen occasionally during the summer,



but now, in the autumn, it is full of flowers. It is scarcely a foot in height; the leaves are narrow and stiff, and the flowers on the end of the shoots. They are small, in clusters, and of a delicate lilac.—EDITH.

A SWEET-PEA HEDGE.

A reader of the MAGAZINE writes as follows:

"I have several times in your MAGAZINE seen mention of the beauty of Sweet Peas grown by your correspondents. I send you a small box of mine by to-days mail, to let you see whether mine will compare with them. I have a complete hedge ninety feet long, dividing the clothes-drying ground from the farm. The vines now stand up five feet nine inches high, and are one perfect mass of bloom, as they have been all summer. In the spring I planted the Peas in two rows, two and one-half feet apart; at each end of the rows I placed a tripod of cedar poles, at the foot of the outside poles I attached a telegraph wire, and also one where the poles crossed, drawing the wires tight and supporting them at proper distances for the Peas to cling to. I passed fine linen twine from wire to wire, so that at a short distance the vines look as if they stand alone. The poles of the tripods run well above where they cross, and on this I have trained Morning Glory."

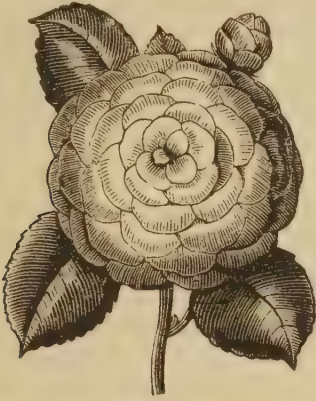
LOBELIA CARDINALIS.

MR. VICK:—Can our beautiful wild Cardinal Flower be cultivated in our gardens, or must it remain wild? If so, I fear the race will soon be destroyed.—MARIA.

The Lobelia grows freely from seed, and is improved by cultivation. Both seeds and plants are for sale by seedsmen and florists. In the autumn and early spring plants can be taken up from the fields and transplanted to the garden.

THE CAMELLIA.

The Camellia is a flower very generally admired, and, therefore, its cultivation is frequently attempted, even by those unskilled in its proper treatment and without facilities to manage it successfully. We are often asked how it should be cared for as a house-plant, and to all such in the northern part of the country, where it is necessary to maintain good fires in warm houses for several months of the year, we have no hesitation in replying, let it alone—do not expend care and labor where there is so little prospect of reward. In the Southern States the Camellia can be raised with not more than ordinary care, and there it deservedly receives a fair share of attention. At the north it must be considered entirely a greenhouse plant, and as such will be always highly prized. In some respects the Camellia is a very exacting plant, and this is



especially so with soil; it will not flourish well in a limestone soil and this is one of the great obstacles to its successful culture. In those sections where the American Laurel, or *Kalmia*, or the *Rhododendron* grows naturally there is no difficulty in forming a suitable soil for the Camellia; some good loam just under the turf and equal parts of sand and leaf-mold will make a proper material. But in what are called limestone countries the potting soil requires more attention, and in order to ensure success some fibrous peat should be obtained, and this mixed with leaf-mold and sand will make a soil as good as can be desired. The temperature of a house for the Camellia should be kept at an even and low heat; while the plants are making their growth the heat may be increased to 65° or 70° , falling at night to 60° or even lower, and frequent ventilation be given to ensure a stocky growth. During the growing season water should be given freely, but the pots must have ample drainage; at this time, too, an occasional watering of liquid manure will be beneficial to weak plants, but need not be applied to those of sufficient vigor. Ordinarily only a moderate supply of water is

needed. A moist atmosphere is always desirable for this plant, but in its season of actual growth especially, particular care should be given to this point, and to frequent syringing of its foliage. When the plants are in bloom a temperature of about 50° is best, and should not be many degrees higher; at this time the supply of water should be increased.

THE SYRACUSE BOTANICAL CLUB.

In the early part of the year we called attention to the formation of a botanical club by the ladies of Syracuse. This club, which at first was called after its founder and president, Mrs. RUST, the Rust Botanical Club, has since changed its name, at the request of the president, and is now styled the Syracuse Botanical Club. The object of the Society is stated to be mutual instruction in botany, and to induce women especially to occupy themselves in a way both improving and pleasant. The Club has a weekly meeting for study, and once a month a business meeting. It is fully organized, having a constitution and by-laws and a full corps of officers.

During the summer it has made eighteen Saturday excursions in search of plants—these weekly excursions have only been omitted when the weather has been too inclement to admit of them.

The first subject of study was the native Ferns of Onondaga county, a collection of which had already been made by their secretary, Mrs. F. J. MYERS. These consisted of forty species, and a thorough examination of them was made and an accurate knowledge of them obtained by the members. Curiously enough, in their rambles they discovered in one locality a very rare Fern, *Scolopendrium officinarum*, or Hart's tongue. It is said to be known in only two other places in the United States—the Jamesville lakes in the same county, and Chittenango Falls, Madison county. It was found in the town of Geddes, where, it is said, it was also found in the year 1804 by the English botanist, PURSH, but since that time this locality or station has been lost sight of. An illustration of this Fern was given on page 253 of this volume, and there called *Scolopendrium vulgare*, which is the same. We have very little idea that our readers will find this Fern except at the places already named, but it is well to be on the lookout, and if any one should be so fortunate as to discover it, we shall expect to be notified.

The most remarkable discovery of the Club, however, is that of an orchidaceous plant never before found in this country; it is a variety, called *viridens*, of *Epipactis Helleborine*, a European

plant. Dr. GRAY says in relation to it: "Orchids are the least introducible of plants, and I should have no doubt that this is truly indigenous in this only known American station. It is to be noted that it is to be found in the very district which is almost alone in possessing *Scolopendrium*, (the indigenous character of which is confirmed by several localities, all in completely wild stations), also *Botrychium Lunaria*, a third European species of rare occurrence in this country."

We think the Club may indulge in a laudable pride in their summer's work, which has not only increased their knowledge but contributed largely to their health and happiness. When shall we hear from the next club? Now is a good time to begin.

DOUBLE PORTULACA.

MR. JAMES VICK:—Having purchased seeds of double *Portulaca* three years ago and followed your directions for their cultivation, I have this season surprised the lovers of flowers with a circular bed in which not a single or semi-double flower is grown. Last year I had all growing together, and I pulled out all the single flowers, leaving none but double and semi-double. This spring I made up my mind to have a bed of double flowers; I therefore set apart a circular bed, and as the flowers opened this summer I took the double-flower plants and removed them to this circle, and by the 1st of July I had it filled, and of all the sights I ever beheld this was the most gorgeous. Many times the enquiry has been made, "Where did you obtain the seed?" I referred all to you. One gentleman and lady called, who were entire strangers to me, and introduced themselves by saying they had walked out to see a double *Portulaca*. The gentleman stated he had often read of such and had many times purchased the seeds of double *Portulaca*, but had never seen one, and asked if I would be so kind as to show them one, as a friend of theirs had informed them I had such. I brought them to my garden and showed the circular bed with thousands of blooms at the moment, it being a fine, bright day, about mid-day. They stood spell-bound in wonder, and then came the inquiry, "Where do you obtain your seeds?"—WM. G. C., *Paris, Ont.*

MINISTRY OF FLOWERS.

My *Petunias* and *Phlox* and *Marigolds* are pouring on the air their rich perfume. The *Tuberoses* are just opening and the *Morning Glories* are peeping out here and there among the flowers, so exquisite in color and shape, affording to me that kind of pure enjoyment

that is a true recreation. Science and art are now-a-days developing on every hand; new discoveries are constantly being made; all honor to those engaged in these pursuits; but those who inspire in the wearied and the sad a love and interest for flowers are those my heart blesses to-day. The ministry of flowers comes to us all, even the humblest. The mother, wearied with her varied work, can sit under her porch and catch the fragrance, the rich perfume of the flowers, while she silently gazes at the stars. The tired student unconsciously receives rest for his wearied head as he inhales the delicate odors of the garden. The humblest cottage may be clothed in beauty with the graceful drapery of vines so as to charm the eye of the passer-by who gives but a passing glance at the stately mansion cold and barren of these beautiful objects of nature.

Teach the young early to cultivate a little garden spot. Every child, boy or girl, has a natural capacity to be interested in flowers. What a rich legacy to leave at your death, if nothing more, a love for the cultivation of flowers!—FANCY FREE.

ELM TIMBER.

A writer in the *Transactions of the Scottish Arboricultural Society* calls the attention of practical men to the following facts:

Elm timber is as rapidly grown as any broad-leaved wood. It is convertible with scarcely any waste, since the sap-wood has been proved to be as durable for architectural purposes as the heart. It excels almost every kind of wood in durability. When well grown it is almost entirely free from defects. When properly cared for it is not liable to diseases or serious parasites.

ROOTS AND HERBS.

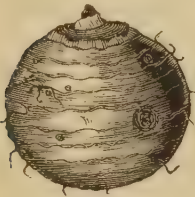
The business of collecting and curing medicinal herbs and preparing them for market is carried on very largely in North Carolina. Dr. GRAY has recently been visiting these localities, and, while at one establishment, an order was received for ten tons of *Mandrake* root to go to France. Another order was for two tons of *Maiden Hair*, *Adiantum*, and still another, an unlimited order for *Liver-leaf*, *Hepatica*.

WELLINGTONIA GIGANTEA IN GREAT BRITAIN.—This California Conifer has yielded cones in many places in the British Islands, but the seeds they have supplied, though they have shown symptoms of germination, have never produced seedling plants. Perfect seed may never be produced so far from their native mountains.

THE CALADIUM BULB AS FOOD.

MR. VICK :—Is it true that the bulb of Caladium is eaten for food in southern countries, as I have been informed. Some say that the juice is poisonous. The name, *esculentum*, would indicate that it is eatable. Will you please enlighten your readers on this subject? —INQUIRER.

On referring this subject to T. B. PICTON, Esq., of Akron, Ohio, some time since, the following facts were kindly furnished: "In regard to the juice being poisonous, it is true of bitter Manioc, or Cossaov, or Cassova, from which our Tapioca is made; but the tubers of the Caladium require no more preparation than a Potato. I have eaten them constantly for twelve or thirteen years. In Jamaica they are called "Cocos." There are two kinds, known as the white and the blue, the latter cooking dry and hard, whether roasted or boiled, and less in size than the white. You may judge how they grow in the mountains of Jamaica when I tell you I have seen a man jump a fence into a Coco patch, pull a leaf, and throwing it over his head with the



CALADIUM ROOT.

point down his back, completely turn off a heavy mountain rain. The plant likes plenty of rain. The Sweet Manioc is cooked as a potato, and is very nice. The bitter is ground, the pulp put in a coarse bag, and put under heavy pressure for ten or twelve hours; the dry or damp pulp is then baked in a hoop on a flat, iron plate, and makes a wholesome but rather harsh bread. The two plants are so much alike that it requires a practiced eye to distinguish them. The starch of the Manioc is much used to adulterate Arrowroot, being less than half the price of the latter; only a microscope can detect the mixture. Manioc starch is in fine spiculæ, Arrowroot in minute globules. The main root of the Caladium is not used; the young tubers thrown out horizontally from the main root are broken off before they turn up to the surface. The blue will be four to six inches, the white often ten inches in length; where broken from the root they are from one to two inches round; the opposite end may be from four to six inches. They form a staple article of food with most of the colored people, though the white people use the white kind freely. In dry weather localities they are almost unknown, the Sweet Potato, the Pumpkin and Beans taking their place."

CARDINAL FLOWER.—The flower received from B. KIRBY, of Sterling, Kansas, and which first made its appearance this season, is the Cardinal flower, and is a very pretty acquisition.

HANGING BASKETS.

Few things are more graceful and attractive than a hanging basket or vase filled with proper plants that have been kept healthy and in a growing, thriving condition. A basket that has been injudiciously filled, or the plants in which have become diseased or starved, is about as sorry a sight as one will be apt to meet with. In a room it is almost impossible to moisten plants fully and properly, and we have always advised that baskets should be taken to some outer room every day or two for a good soaking, where they might remain until dripping had ceased. Where a wire basket is used, or an opening is provided for drainage, dripping



often continues for some time, and a correspondent has furnished us with an arrangement, which we have shown in the engraving, for catching this drip. It is merely a second little basket or earthen vessel suspended under the main one, and planted, so as to be not only useful but ornamental. We say to all, do not attempt to keep plants in a hanging basket or vase unless you are resolved to give them all the attention necessary to secure perfect success.

FLOWERS OF KINDNESS.

A friend, in Pittsburg, Pa., wrote us, some time since, "I found myself well paid for the trouble, so called, of growing flowers by being able to give so plentifully to hospitals, festivals, &c. I think I have made more fast friends by flowers than money could ever win. The ladies, young and old, call on me, and are so complimentary that I am afraid they will make me vain of my floral ability."

EUPHORBIA FOR FUEL.—A correspondent in Kansas had a third of an acre of land upon which he failed to put a crop, and the *Euphorbia marginata* came up very thickly. He cut them down, dried them and hauled them to the steam flouring mill for fuel, having 3450 pounds, for which he received \$1.50 per ton.



INFLUENCE OF A ROSE.

One intensely hot afternoon about the middle of August, nine years ago, I was sitting in my vine-shaded east veranda, dreamily wondering how long this sultry weather would last; my crochet work, with which I had been making a pretense of industry, had fallen on the floor, to the great delight of Snow, my favorite kitten, whose graceful antics were the only signs of life about the place. Suddenly I heard a shriek in a female voice, followed by a curious mixture of reproaches, pitying words, and bitter imprecations. I knew whence the sounds proceeded, for I had heard that a low family, such as the negroes call "po' white trash," had moved into a cabin in a skirt of timber edging the prairie, about a quarter of a mile distant. Obeying my first impulse, I caught up my hat and set out as rapidly as I could walk in the direction of the cabin. I was there in a few moments, and found an infant of ten months old writhing in convulsions. The youthful parents seemed utterly stunned and incapable of suggesting or doing anything. The only information I could elicit from them was the fact that the child, in crawling about, had found a paper containing strychnine, and had "pisened hisself." I saw at a glance that deeds and not words were most needed just then, and looking around, seized a large tin dipper from the water pail, as the only available vessel in sight, and without a word of explanation darted out to the well, where I had seen a most motherly-looking brown cow as I had come up to the cabin. Sometime in my life, I could not recall when, or where, I had heard that fresh milk was an antidote for poison, and I was going to call into requisition an accomplishment of mine long ago laid upon the shelf—to "milk the cow with the crumpled horn."

If my tease of a brother had been present, he would have had grounds for his favorite comment, "Delia always goes like she was just discharged from a gun." But good old Sukey seemed in nowise put out by my boisterous approach and awkward milking, and calmly pro-

ceeded with her cud as though she fully understood the situation. In less time than I can write it I was back in the house and holding the rich, foaming draught to the child's mouth, while the parents looked on perfectly wonder-stricken.

In a very short time the child was much better, and I had more time to note the surroundings. Everything in the room bore evidence of filth and squallor. The man evidently was of German extraction, and looked just what he was, coarse and surly, under the influence of bad whisky. The girl-wife and mother seemed a fitting mate. She wore a dress of blue cotton goods, not over clean; nothing like a collar was visible; her dress buttoned over the bust with big, coarse, white buttons, and she wore no apron to soften the hard outlines of her figure; her rusty, tangled hair seemed an utter stranger to comb or brush, while her nails were long and dirty, and, if the creature owned such a thing as a bonnet, she certainly did not wear it, for her face was brown as a gypsy. When I asked her age, she told me she was "sixteen,"—just the age of my own daughter, my one ewe lamb, that I so guarded from every roughness, and idolized so much. Sixteen years old, and so inured to toil and ignorance as to appear to me almost like a beast of burden!

Neither of them showed by word or sign that they appreciated in some degree my presence or efforts to aid their child, and, as I walked slowly home at sunset, I was full of sad musings on the debasing effects of ignorance. I called myself a Christian, I contributed yearly to the spread of the gospel among the heathen, and here were heathen at my door, but how was I to reach them?

I could not keep poor Margery out of my mind for days. My brother laughed at what he styled my "new whims," and from his superior height of worldly wisdom, treated me to a choice homily on caste, and peculiar adaptation to peculiar spheres, and all that sort of thing; but I could not help thinking of those sixteen

years of darkness to a human soul. When I looked loving admiration on my own darling daughter, in her dainty, girlish costume, I would remember Margery's coarse dress and heavy brogans, and I would find myself speculating on what she might have been with equal opportunities. Perhaps it was morbid, but I could not avoid a certain sense of blood-guiltiness, as though I, in some way, was answerable for the creature's degraded obscurity. Perhaps a swift backward glance into my own life, when I, a crude young girl was lifted from poverty and obscurity; when people kindly said, as they always do say, when a young girl marries an old man, "His money bought her; she can't love so old a man as Esquire ROLLESTON!" But people do not always know, and "Auld Robin Gray was a kind mon to me." I say perhaps it was a remembrance of my own hard, unlovely youth that caused me to feel so toward that strange girl.

A week or two after the event I have related, I was visiting at the house of a neighbor, and seeing her clothes-line covered with snowy garments, I laughingly asked her if she had made a reality of the mythical Aladdin's lamp, for, without some supernatural aid, I could not understand how she could get washing done in the cotton-picking season, when all the negroes were in the field. Directing my attention to the yard, she said, "See my Genius!" and there was Margery, my "heroine," as my brother mockingly named her, and I learned, too, that she took in washing when she had water. So, before I left my friend's house, I went out to her and asked if she would "come to my house and wash for me the next Monday." She simply assented, without appearing to recognise me; but a pleased look came into her rather stolid, vacant face, when I added that I had two good cisterns.

The people in this section of Texas know how to appreciate water in these long, long, long drouths, when every painful must be economized; when the stagnant water holes in the creeks are all dried up, it is distressing to hear the cattle lowing with their fierce thirst. All the water from the washbasin, indeed, all the waste water about a place, must be utilized by hogs and poultry. Go out to church during one of these severe drouths and you will see that the most popular shade in costume is the true "Isabella." The people are generally able to have water in abundance, by a very small outlay of labor, time and money, but are strangely indifferent about it. Margery was glad to get plenty of water, and I was glad to secure her services, for I saw that she understood her business and did her work well.

But she was always just as reticent and reserved, and as curt in her speech, as she was when I first saw her; always coming and going promptly through the back yard, and never lingering on any account after her work was done. Things went on in this way until the middle of October. I had never on any occasion seen her husband, and all my inquiries in regard to her child's welfare were answered in the shortest manner, and but for her faithful service I could have had it in my heart to dismiss her, for her language and deportment savored of disrespect, which my own servants were quick to note. One evening I was standing by the balcony up stairs, admiring a lovely sunset; it was Monday, and the clothes were dry on the lines, and I supposed Margery had gone as usual through the servants' entrance, but, a slight noise attracting my attention, I looked over into the front yard and saw her standing near a white Tea Rose bush, which was covered with the sweet, creamy blossoms. No heathen devotee ever wore a more rapt look of adoration, and the thought came into my mind that perhaps she loved flowers as well as I, only in a different way. I was soon out in the yard near her, and, speaking kindly to her, asked if she was "very tired?" A curt "no," was the reply, but I was too familiar with her peculiarity to be put out by it, and besides, when one approaches the plane of an inferior, resentment of uncouthness is impossible, if a sense of justice is retained. So I simply cut off a magnificent Rose surrounded by a family of buds, and passed them to her in a matter-of-course kind of a way, as though she were my visitor instead of my washerwoman.

I had touched a master key, a flash of delight went over her face, and the hard, black eyes became suddenly dusky as with tears, seeing which, I turned away and gathered a handful of bright Verbenas and Petunias, adding them to her bouquet, and remarked to her that if she would bring some boxes or cans, the next week, I would give her some plants for winter-blooming, and instructions how to take care of them. I thought there was an unusual lightness in her step as she bade me a cheerful "good evening" at parting. The next week when she came she brought three small boxes, very tastefully made and painted, and she slyly told me, as she set them on the veranda, "he made 'em," adding, "he" was "coming to carry them home this evening." That day Margery sang over her work, and we all noticed her unusual cheerfulness. "Poor creature," thought I, "this simple gift, and sympathy from her husband in place of angry oaths, has lifted her soul into a purer atmosphere."

Late in the afternoon, about the time Margery usually got through with her work, true to his promise, Ottinger came over, and, filling his boxes according to my directions, listened with respectful attention as I gave him a few suggestions as to the care of the roots and slips I gave him. I readily acceded to his request to walk through and examine my grounds. The man was perfectly sober, and was dressed in a coarse, clean suit, and altogether looked entirely different from the Ottinger I had seen once before during the summer, and under such peculiar circumstances. He took great interest in reading the various labels, and I gave him permission to gather as many seeds from certain annuals as he liked. I also allowed them to go into my grapery and pluck a few bunches of the late varieties, and having discovered that he was deft in the use of tools, engaged him to make some boxes and plant-stands for my conservatory, for a reasonable sum.

I think Ottinger went home that night a changed man. He had all the passion for growing things so natural to the German, and he said afterward that he resolved "to turn over a new leaf." He abandoned his bottle and cards, and began to till the soil. I often employed him about my place, and profited very much by his original suggestions. It was as though a dormant faculty of his soul had suddenly awakened into life. He owned a few acres of brushland, which he cleared up that winter, and put out an orchard and vineyard.

As years went on Ottinger became known as a "fruit-man," and prosperity shone upon him; the old cabin was torn down and replaced with a snug cottage, with flowers and vines everywhere they could be made to grow around it. All this has exerted a softening influence on Margery, and it is hard to realize that the quiet, graceful, well-dressed woman, sitting in her sewing chair, humming a soft accompaniment to the click of her Singer machine, is the uncouth washerwoman of nine years ago, or that the sturdy, red-cheeked little fellow "helping father" in the nursery, is the same dirty child I rescued from the grave in such a strange manner. But "truth is stranger than fiction." Where poverty, ignorance, dirt and disorder reigned supreme, now neatness and tasteful order prevail; a few of our best popular monthlies mingle with agricultural papers on their tables, and altogether I am proud of these friends of mine. Perhaps it is because I was once very poor and ignorant myself, and, like them, was an ardent lover of vine, fruit, leaf, and blossom, and we all know that "one touch of nature makes the world akin."—JENNIE D. HOLMES.

BOTANY FOR LITTLE FOLKS.

The Bell-worts, either wild or cultivated, are plants exceedingly interesting to the naturalist, to the gardener, or to the ordinary admirer of flowers. The first thing about them that especially attracts our notice is their bell-shaped corollas. In these we find a wide deviation from such flowers as the Buttercup, the Poppy, the Pink, the Mallow and the Rose, and many others that have distinct petals. We have already traced the relation existing between the parts of a flower and ordinary leaves; we have learned that each of the parts, a sepal, a petal, a stamen, or a pistil, is but another form of a leaf—a specialized form for a particular and definite purpose; we have learned that each of

these parts, or as they are sometimes called, transformed leaves, assumes its proper place, and altogether make up the form of a flower merely by the arrest of development of the stem. But we find in this flower a further deviation from the primitive leaf form, for the edges of each sepal and each petal are so united to the edges of each adjoining



Fig. 1.

Campanula Medium. sepal or petal as to form a calyx and a corolla more or less bell-shaped. There is a large class of flowers formed in this way, and the class receives its name from this peculiarity of the united edges of the petals, such flowers being called monopetalous—having only one petal, but, as has already been noticed, it is probably more proper to consider that several sepals have united, and, therefore, another word, gamopetalous, meaning, united petals, is used to designate flowers of this character. We have heretofore seen that the separate flowers of a composite flower-head are monopetalous, or gamopetalous. Such flowers as the Pink, the Rose and the Poppy are called polypetalous, that is, having many petals. Taking *Campanula Medium* for examination, which is shown at fig. 1, we see that the upper parts of both calyx and corolla are divided into five lobes, the lobes of the corolla being alternate with the lobes of the calyx. The line of union of the parts is very distinct. The calyx and the corolla are each situated around the summit of the ovary, and upon it stand, also, the stamens, five in number and alternate with the lobes of the corolla. The position of the stamens on the ovary is clearly represented by fig. 2, where, at the left, are seen the five

stamens standing upon the ovary, and at the right is the pistil alone, the stamens having been detached; in the middle is shown the pistil with one stamen, where its position on the edge or circumference of the flat-topped ovary is very apparent. The style, it will be noticed, is covered with short hairs; these hairs are called collecting hairs, as they serve to collect and hold the pollen that falls upon them.

Our different illustrations show that these plants have simple or undivided leaves and that they are arranged alternately upon the stems.

The Latin name, *Campanula*, means a little bell, and the natural order, or family, to which these plants belong is called *Campanulaceæ*, meaning Campanula-like plants, thus the signification is precisely the same as our English word, Bellworts.

Most of the plants of this order yield a sweet, milky juice, and the roots of some of the

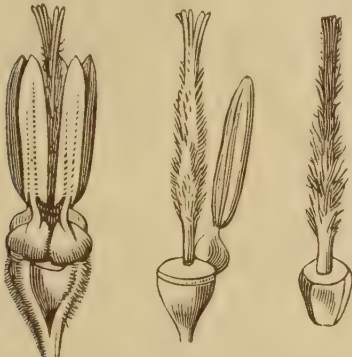


Fig. 2. Ovary, Stamens and Pistil.

species have been used as food; with scarcely an exception they are herbaceous, some of them annuals, some biennials, and others perennials. There are about a dozen genera and over five hundred species, but among them all there is not a single species of any particular importance, either medicinally or for any economical purpose; but for their beauty many of them are highly prized and are cultivated with care; some of them we shall notice.

First, however, your attention is called to what appears to be a feature that almost all monopetalous or gamopetalous flowers have in common, and that is, a nodding, or declining posture; if they are not always so posed that the throat points downward, yet their pedicels or stems are so slender that the slightest weight, like a few drops of water, will bend them down. By many it is considered that this position protects the honey the flowers may contain from being washed away by the rains, which would soon fill their cups if erect. Besides the monopetalous flowers, many others, like the Lily and Hyacinth, Snowdrop and Lily of the Valley, and Fuchsia, having bell-

shaped corollas, have, also, the drooping habit, and it is easy enough to suppose for the same reason.

As a favorite garden plant *Campanula Medium* has long held an honored place; it is commonly known as Canterbury Bells, and sometimes by the name Coventry Bells. Undoubtedly both of these designations have been acquired from the names of the places in England which they bear, where, at some time, especial attention has been paid to their cultivation. It is a biennial plant, and the large flowers vary in color from shades of soft blue to a deep indigo. The first year only a large tuft of rough, hairy leaves are formed, but the second year the broadly-branched flower-stem rises to a height of about two feet, and is covered throughout its whole extent with a mass of bloom.



Fig. 3. *C. Medium*, var. *calycanthema*.

A variation from the usual type of this species is found in the form called *calycanthema*—from the words *calyx*, and *anthos*, a flower, meaning a flowery calyx; the calyx is colored like the corolla. This is an admirable variety and produces its beautiful flowers in great profusion. At fig. 3 an attempt is made to show the upright branching and pyramidal habit of the plant and two of its flowers are represented, reduced in size.

In order to have these plants continuously it is necessary to raise a few of them from seed every year.

Campanula grandiflora, fig. 4, has a thick, fleshy root, which sends up a number of stems bearing broadly ovate and almost sessile leaves, and along their upper part flowers are borne in the axils of the leaves, and one at the extremity. The flowers are very large, often being more than two inches in diameter; they are not very much bell-shaped, being much broader than deep. They are of a deep blue, but there is a variety differing only in color, which is white. This species is a perennial and lives in a heal-

thy condition for a long time. It is a native of Siberia.

Campanula Carpatica is an old favorite, much smaller in size than either of those already mentioned. It has broadly ovate, cordate, radical leaves, and sends up flower stems from twelve to fifteen inches in height, on which are borne loose cymes of light blue flowers. There is, also, a variety of it with white flowers. It is a very desirable sort in the garden, as it produces its flowers in great abundance and for a long time.



Fig. 4. *C. grandiflora*.

C. glomerata, as our illustration shows, has a very erect habit of growth. It takes its name from the fact that its flowers are produced in a dense cyme or glomerule; these flower clusters terminate the stems and also proceed from the axils of the leaves at the upper part of the plant. This species is perennial, and is a native of Europe, but it has become naturalized in some parts of this country. The flowers are deep bell-shaped, and vary in color from white to an intensely deep purple. It is a beautiful garden plant.

C. rotundifolia is a native of Europe, and also of this country. It is a low-growing perennial plant and takes its specific name from its radical leaves, which are ovate, or sometimes reniform (kidney-shaped) cordate. These broad leaves are found on the plant only in the early spring, and are succeeded by linear leaves on the stems as soon as these commence to grow; shortly after the narrow leaves begin to form,



Fig. 5. *C. glomerata*.

the broad leaves wither and die, and it is a remarkable thing to find a plant in flower with the broad leaves; that very peculiarity, therefore, which distinguishes the plant, the casual

observer would probably never detect. This species is the one that more especially bears the name of Harebell, or, as some writers say, Hairbell, and pretend to trace the name to the fine, flexible, hair-like flower-stem. But this explanation of the origin of the word is doubtful, as most English writers use the form, Harebell. This plant is one of the most graceful of all the different kinds, and, although seldom cultivated, yet it is really very valuable for this purpose, growing with great vigor and producing a succession of bloom for a long time. There is a white variety of this species, but it is found much more rarely than the other.



Fig. 6.
Campanula rotundifolia.

Venus' Looking Glass, *Campanula speculum*, is a low-growing annual species, bearing solitary terminal and axillary flowers. It is easily raised from seed, and when grown in masses is a very handsome and effective plant. After having once introduced it into the garden there is very little difficulty in retaining it, as it seeds itself and the young plants will be found in the spring on the old bed, and can be removed where wanted. Although the flowers are small compared with those of the perennial sorts, yet they are produced in abundance and for a long season; there are varieties of blue, white, and rose-color. This plant is a native of some parts of Southern Europe.

All the Bellworts delight in a rather cool, moist situation, and this should be borne in mind in their culture. The climate of the British Islands is especially favorable to them on account of the cloudy skies and moist atmosphere.



Frequent allusion is made by English writers to the Harebell, and to the different kinds of Bellwort by their several names. *Campanula Trochelum* is called the Great Throatwort, and

it is to this that Sir WALTER SCOTT refers in the poem of Rokby :

—“ he laid him down
Where purple heath profusely strewn,
And Throatwort with its azure bell,
And moss, and thyme, his cushion swell.”

Who has not heard of the Bluebells o' Scotland, so fondly alluded to in the old Scotch ballad of that name?

Where, tell me where, did your Highland laddie dwell?
He dwelt in Merry Scotland, where blooms the sweet Bluebell,

And it's O, in my heart I lo'e my laddie well.

Sir WALTER SCOTT must have been a great admirer of the Harebell, as he so often mentions it with the pleasantest associations, as, for instance, in describing the charms of ELLEN, Lady of the Lake :

“ A foot more light, a step more true,
Ne'er from the Heath-flower dash'd the dew ;
E'en the slight Harebell raised its head,
Elastic from her airy tread.”

In the same poem, to the sad recital of the former glory of the Douglass Clan and the prophetic wailings of the old minstrel, ALLAN-BANE, ELLEN soothingly answers and strives to assure him of her safety and contentment, and then says :

“ For me ’—she stoop'd, and, looking round,
Pluck'd a blue Harebell from the ground—
' For me, whose memory scarce conveys
An image of more splendid days,
This little flower, that loves the lea,
May well my simple emblem be :
It drinks heaven's dew as blithe as Rose
That in the King's own garden grows ;
And when I place it in my hair,
Allan, a bard is bound to swear
He ne'er saw coronet so fair.'
Then playfully the chaplet wild
She wreathed in her dark locks, and smiled.”

JOE'S SURPRISE.

Joe has seen ten summers. He lives in the country, a hilly, romantic place, where the fine, sparkling water comes trickling down the hilly slopes to refresh us; just the place to charm Joe, who delights in nature and is often found by his sisters and cousins and aunts lying on the ground gazing into the sky, or examining some curious specimen of nature's handiwork.

Aunt Mary enjoys nothing so much as joining Joe in his rambles, for he is always making quaint speeches and starting on new and unexplored trains of thought.

One bright fall day, just the time to go to the woods to collect the rich leaf-mold to mix with the garden soil for the plants that make our sitting-rooms look so charming and homelike in the winter, Joe and Aunt Mary, with a troop of boys and girls, started with a basket and trowel to the nearest woods. After gathering the Holly Fern, with its rich, dark, glossy

fronds, and filling the basket with mold formed from the decayed leaves, we all started homeward, each one bearing some chosen specimen to keep for admiration through the long winter coming.

“ Oh, dear !” exclaimed Aunt Mary to Joe, “ run back, quick, and get the trowel.”

But Joe looked up with such a merry twinkle in his eye that his aunt suspected mischief, especially as the children all began to laugh and look knowing, too, and then she saw the end of the trowel peeping out of the soil in the basket.

“ Oh, you rouses,” said she, as their laughter filled the air, the sweetest music, the pure,



MILKWEED SEED (ASCLEPIAS).

rippling melody of children's voices, full of glee and mischievous mirth. Could anything be sweeter !

“ Would you like to see a fish ?” said Joe, looking very wise and comical.

“ Why, where is the water ?” said all the children in chorus.

And Joe laughed one of his peculiar, knowing laughs, that make him so interesting; for the children all knew that Joe had some surprise for them. Aunt Mary was puzzled this time, but said nothing; only a moment's suspense and Joe leaped the fence. Aunt Mary put the basket on the ground and leaned against the fence to watch Joe, who walked quietly up to some tall Milk-weeds and pulled one of the ripest and longest of the pods.

Soon all were seated on the ground looking at Joe, who opened the pod slowly and cautiously, bringing to view a curious thing that, sure enough, bore a strong resemblance to a fish, the seeds lying one over the other like the scales of a fish.

Joe held it up exultingly: “ Don't it look like a fish ?” said he.

“ Who showed you that ?” said Aunt Mary.

“ Nobody,” replied Joe, “ I found it myself.”
—FANCY FREE.

LEMON VERBENA A TREE.

Incredible as it appears, the residents of Santa Barbara, California, state that the Lemon Verbena, *Aloysia citriodora*, grows into a tree there, something of the size and shape of an Apple tree, and that it is often seen above the roof of a cottage. The Crape Myrtle and the Camellia thrive there well in the open ground.

PREMIUMS.

Some of our friends have suggested that we offer premiums for obtaining subscribers. As a slight compensation to those who labor among their neighbors in getting up clubs, we propose to give one of our *FLORAL CHROMOS*, on paper, to every one who sends us a club of *Five Subscribers*; and for *Twelve Subscribers* one of our *CHROMOS ON CLOTH AND STRETCHER*, both sent postage free. To any person sending us *Twenty Subscribers* we will forward by express, expressage paid by us, one of our *FLORAL CHROMOS NICELY FRAMED IN WALNUT AND GILT*. All to be at club rates—\$1 each.

We hope our friends will commence to work early and in earnest. Were all to do what some have done, we should have a hundred thousand subscribers by the first of January.

OUR MAGAZINE FOR 1880.

One more number completes the present year. We shall try to make it better than ever next year. Many subscribers would do us and their neighbors a favor by getting up a club. There are few places where a club of five could not be obtained. Then the *MAGAZINE* costs only a dollar each, and twelve numbers and twelve colored plates are a good deal for a dollar. Then, in addition, we make the getter up of the club a present of one of our beautiful *Floral Chromos*.

SEND IN NAMES EARLY.

It will be a great convenience if our subscribers will renew their subscriptions and send in their clubs early. It will aid us very much in arranging our books, save a liability to mistakes, and enable us to send the January number so that you will have it to read Christmas Day, or at least can look at the pictures, if you are too happy to read.

NOT A BAD HOLIDAY PRESENT.

A subscription to our *MAGAZINE* would not be a bad holiday present. Our price is so low that we do not feel as though we were pleading our own cause when urging people to subscribe. It is so ridiculously low that one of the popular magazines refused to publish our advertisement with the price attached, on any terms.

EXTRA COPIES.

Many persons would like occasionally to send some number of the *MAGAZINE* to a friend, on account of some article or illustration, but dislike to lose a number from their volume. To our subscribers we will send extra copies for ten cents each, or will mail them to any address desired.

BINDING THE MAGAZINE.

We will bind the *MAGAZINE* for any subscriber for 50 cents, and return the book with the postage or express charges paid by us. If subscribers will send the eleven numbers in season we will add the December number and return the volume before the Christmas holidays. Our colored plates are so handsome that some are tempted to take them out for framing. Occasionally one gets soiled. We will send extra colored plates to any of our subscribers for FIVE CENTS each.

A GARDEN BOOK.

Besides this *MAGAZINE* we publish *VICK'S FLOWER AND VEGETABLE GARDEN*, an elegant work, with numerous illustrations and six beautiful colored plates—five of flowers and one of vegetables. It is a book of 170 pages. Price, 50 cents in paper covers, \$1 bound in cloth.

FLORAL GUIDE.

The *FLORAL GUIDE* for 1880 will be ready to send out early in December. It will be very handsome—100 pages, 500 illustrations and an elegant colored plate. To all of our customers it will be sent free, and to any one else for FIVE CENTS—about the cost of postage.

BOUND VOLUMES OF THE MAGAZINE.

The Bound Volumes of our *MAGAZINE* will make a very fine Christmas present. We can furnish copies of 1878 and 1879 bound for \$1.75 each, postage prepaid. We shall have bound copies of 1879 by the 10th of December.

LOST NUMBERS.

If a number has failed to reach you during the year, and your volume is thus incomplete, send us a postal card stating what number you want. It will cost you only a penny, and we will mail you the number at once.

COVERS FOR MAGAZINE.

We will furnish elegant cloth covers for the *MAGAZINE* to our subscribers, for 25 cents each and prepay postage. Any bookbinder can put on these covers at a trifling expense.

SPECIMEN NUMBERS.

To those who wish to get up clubs, we will send specimen numbers free, so that they may not soil their own copies, which should be kept clean for binding.

TRIAL SUBSCRIBERS.

To those who wish to see a number or two of the *MAGAZINE* before subscribing, we will send a copy for 10 cents, or three copies for 25 cents.



PAINTED FOR VICK'S MONTHLY.

Everlasting Flowers.

RAHN & KARLE, LITH. ROCHESTER, N.Y.